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ASPECTS OF THE ORGANISATION  
AND BEHAVIOUR OF U.K.  
PRODUCER COOPERATIVES.

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A Thesis presented for the examination of Ph.D.  
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The growing importance of the cooperative sector in the U.K. over the past twenty years parallels the growth of other important alternative movements over that same period. Despite eleven years of Thatcherism these forces continue to gather strength. This thesis is dedicated to all those people who strive to make their lifestyles and their workplaces more whole and in turn help and encourage others to do the same.

R. J. W. 1990.

In memory of my late Father, Robert Edward Welford.

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## PUBLICATIONS

The following publications form part of this Ph. D. submission:

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Welford, R. J., (1989) 'Growth and the Performance – Participation Nexus: the Case of U.K. Producer Cooperatives', Economic Analysis and Workers' Management 23, 1.

Welford, R. J., (1990) 'The Organisation and Behaviour of U.K. Worker Cooperatives', in Poole, M. (ed.), New Forms of Ownership: Management and Development, Routledge.

Welford, R. J., (1990) 'Post – Fordist Production, Flexible Specialisation and Total Quality Management', European Research, 1, 2.

Welford, R. J., (1990) 'The Determinants of Management Structure and Degeneration in the Co – operative Firm', British Review of Economic Issues, 12, 27.

Welford, R. J., (1990) 'The Cooperative as a Fringe Firm and the Notion of Self – Exploitation', International Small Business Journal, 8, 3.

Welford, R. J., (1990) 'Management in U.K. Producer Cooperatives', Journal of Cooperative Studies, (forthcoming).

## SUMMARY

Reflecting the fact that the cooperative sector in the U.K. has experienced record growth over the past fifteen years, this thesis forms an investigation of the organisation and behaviour of producer cooperatives. The theoretical literature surrounding the labour-managed firm is examined and subjected to testing and empirical observation. In this way a fuller understanding of the cooperative sector and of participatory arrangements in general is achieved. The theory and issues underlying this approach are based on Williamson's (1980) notion of hierarchy, the neoclassical literature surrounding perverse supply effects and extensions of that, examining the nature of the cooperative objective function, growth, managerialism and degeneration, and the nature of self-exploitation in an economy dominated by large capital. The empirical contributions are derived from a data set of 78 producer cooperatives collected by the author. In the analysis contained in this thesis it has been possible to question accepted theory, to offer some alternative modelling approaches, largely based on the use of probit analysis and to seek to describe and explain more fully certain aspects of the organisation and behaviour of U.K. cooperatives. In doing so some attempt has been made to extend the analysis beyond the boundaries of pure economics and to consider facets of participation provided in other disciplines.

Many different measures have been used in the thesis which indicate that whilst cooperatives, like many small businesses, will face problems surviving in the market place, they nevertheless seem largely successful in pursuing their stated objectives. Many of the 'accepted' negative aspects of the cooperative form of organisation, such as perverse supply-side responses, have been shown to be based on restrictive assumptions about the labour-managed enterprise. Assertions about the existence and survival of cooperatives based on ideas of degeneration and self-exploitation have been shown to be questionable. Perhaps surprising to some, it is shown that management does play an important role in the organisation and behaviour of many cooperatives. For example, the existence of some sort of management structure seems important in those firms with high growth aspirations.

Much of the discussion in this thesis suggests that worker involvement can bring about productivity increases. In effect, it is argued that participation can lead to augmentation of the production function. Traditional businesses in general might therefore be advised to consider adopting participation in the workplace. On the other hand cooperatives should also realise that success in conventional terms can often enable them to better pursue their political motivations.

# **CHAPTER 1**

## **INTRODUCTION**

### 1.1 Background

Producer cooperatives in the United Kingdom have their origins in the late eighteenth and early nineteenth centuries. In 1893 there were 113 such cooperatives but at the beginning of the nineteenth century their number steadily declined. It was only during the 1960's that new cooperatives began to be formed and only after 1975 that there has been a major expansion in their number.

During the last ten years the U.K. producer cooperative sector has been experiencing record growth. Whilst still considerably smaller than some of its European counterparts it is claimed that the U.K. sector

comprised over 6,000 worker – members in 1984 (Cockerton and Whyatt, 1984). Cooperatives have been formed in many sectors of industry where they did not exist previously. These include engineering, building and construction and technology fields. But the retail and wholesale sectors are traditionally prominent. The failure rate according to Cockerton and Whyatt (1984) is probably around 5% of startups, which is substantially better than figures quoted for all new businesses.

But just how many worker cooperatives there are in the U.K. is open to considerable debate and the wide range of estimates is somewhat confusing. Whyatt (1987) states:

"The movement has grown beyond all expectations since 1976. We have witnessed a 26 – fold increase which has brought 1,400 co – ops and 12,000 worker – owners into being, the greatest increase in Europe." (p. 5)

The Cooperative Development Agency (CDA) (1984) suggests that there has been and will be phenomenal growth amongst worker cooperatives:

"They have grown so fast during the last few years that if the growth continues at the same rate, there will be over 250,000 co – operative businesses by the end of the

century. How will the Registrar of Friendly Societies cope with over 1000 registrations every week... ?"

Hobbs and Jefferis (1988) however suggest that much of the data on worker cooperatives is misleading as to the true size of the sector. They argue that the central error is the overzealous inclusion of organisations which are not strictly "cooperative". Moreover the data includes cooperatives which are still registered but in reality have ceased trading and other organisations which do not provide full time employment even for one member. Hobbs and Jefferis find that the total population of worker cooperatives may be as small as two-thirds of that which has been claimed by the CDA. This would give a total in 1986 of slightly under 900. Hobbs' (1989) subsequent estimates of the number of cooperatives in existence in 1988 is contradictory, putting the figure at above 1200 cooperatives, with in excess of 9000 workers.

What is clear however, is that it is no coincidence that the growth in the cooperative sector (and similarly in the small firm sector) has been highest during a period of high unemployment. We have seen booms in the 1890's, 1930's and 1980's. Hobbs (1989) suggests that the growth rate in 1982 was 35% for example. But the simple extrapolation of this trend, suggested by the CDA, ignores the social

and economic framework in which this growth has taken place. The growth rate for 1988 seems to have been between 10% and 13%.

According to Hobbs and Jefferis (1988) 86% of cooperatives have less than ten workers (this is confirmed below in table 1.1) and 59% have less than five workers. Thus there does seem to be a tendency towards small size compared with all small firms. This may however reflect the relative youth of the cooperative sector.

When examining the sectoral distribution of cooperatives (table 1.2) we find that compared with traditional small firms production is relatively small and the retailing and service sectors larger. There is much anecdotal evidence to suggest that cooperatives are common in "artisan" areas of business and the survey used in this thesis tends to support that view.

Table 1.3 indicates that 35% of all cooperatives can be found in London and the South – East, although a similar percentage (34%) of private firms are also found in these areas. Perhaps more interestingly, 64% of cooperatives in London are to be found in only six of the 32 boroughs. This may reflect the differing amount of support given by some councils and CDA's.

Distribution of cooperatives by number of workers

Number of Workers	Number of Coops	Percent of Coops	Percent of All Firms
1 – 10	770	86	76
11 – 24	99	11	14
25 – 49	18	2	6
50 – 99	3		3
100 +	4		1

Sources: ICOM Database (amended by Hobbs, 1989) and Department of Employment Gazette (1988) p.39

Table 1.1

Distribution of Cooperatives and Small Firms by Industrial Sector

Sector	Cooperatives Trading <sup>1</sup>	Percent of Cooperatives	Percent of All Small Firms <sup>2</sup>
Agriculture	17	2	1
Building	66	8	5
Catering	46	5	3
Professional	56	6	6
Production	243	28	41
Motor	12	1	1
Retail	147	18	13
Services	249	28	23
Transport	19	2	3
Wholesale	25	2	4

<sup>1</sup>. Where this can be clearly identified

<sup>2</sup>. Under 25 employees

Sources: ICOM Database, Hobbs (1989), Ganguly (1985).

Table 1.2



### Geographic Distribution of Cooperatives

Region	Cooperatives Trading <sup>1</sup>	Percent of Cooperatives	Percent of All Employment
Scotland	74	8	8
North	65	7	5
Yorks & Humb	91	10	10
North West	85	10	8
Wales	62	7	6
West Midlands	62	7	5
East Midlands	81	9	17
East Anglia	23	3	2
South West	35	4	5
London	273	31	27
South East	36	4	7

<sup>1</sup>. Where this can be clearly identified

Sources: As table 1.2

Table 1.3

### 1.2 Rationale for Research

A large number of theoretical studies have refined and extended the basic model of the labour – managed firm in a market economy first introduced by Ward (1958). Despite considerable interest in this institutional form, the issues it raises have rarely been subjected to empirical scrutiny. A dearth of information remains in spite of the increasing number of labour – managed and quasi – labour – managed enterprises operating in Western capitalist economies.

There seem to be two general explanations for the lack of empirical work in this area. Firstly, the actual form of enterprises and their institutional settings differ from the idealised model, distorting empirical results and impairing their generality. Secondly, there is a lack of data, particularly at the enterprise level which severely limits the investigations which can be undertaken. But the existence of a small but growing cooperative sector in the U.K. allows us to examine some of the issues raised in the theoretical literature.

In recent years, an increasing number of economists have shown interest in the internal nature of the firm, in the firm – market relationship, and in consequent questions. Related to this is the challenge by radical economists, to mainstream economics, to show that hierarchical relations of production are principally a tool of capitalist domination over workers. How production and related activities are organised, and the relations between the workers and managers and between workers involved in these activities, is a subject interest which crosses several disciplinary boundaries. Within the economics discipline itself these issues are part of a longstanding methodological debate on realism in economic models. Yet today it is increasingly being recognised that whether ordinary price theory or the developing 'economics of organisation' provide better characterisations of microeconomic reality depends upon the questions in which we are

interested. Central to this debate is the issue of participation and this thesis attempts to make a contribution to that with an analysis of the producer cooperative.

The theoretical literature on the labour-managed firm usually distinguishes it from other firms by assuming that it has a distinct and particular objective function. The best known example of this being the "Illyrian" formulation, originally based on the work of Ward (1958), where the firm seeks to maximise net income per worker. In the past, to many, this has been an adequate characterisation of the worker-managed enterprise even though it implied behavioural tendencies which were perverse (see for example, Vanek, 1970). But there is no real unanimity as to the appropriate maximands or the behavioural rules characterizing such enterprises.

However much of the theorising about the cooperative form of enterprise, whether based on neo-classical optimisation or more subjective observation, have led many academics to reflect the view taken by Domar (1966) at an early stage of the debate:

"Judged by strictly economic criteria, the co-op has not come out well. But even on these grounds, it is quite possible that a co-op may be more efficient than a

capitalist or state owned firm in societies where membership in the co-op, as contrasted with hiring out for a job, has a strong positive effect on workers' incentives."

Estrin, Jones and Svejnar (1987) note that at present, there is little published information on the diverse ways that participatory firms are actually organised. Moreover, there is little empirical evidence or modelling of the relationship between worker participation and enterprise activity. Where appropriate some modelling has been undertaken in this thesis which contributes in general terms to the performance-participation nexus.

Again Estrin, Jones and Svejnar (1987) discussing the conclusions of their work on productivity and worker participation note that these must be:

"... tempered by the acute need for additional empirical research in this area. The comparative nature of our study highlights the diversity of findings across countries and economic sectors. The fact that the estimated effects are very significant in Italy and France and relatively insignificant in the U.K. points to the desirability of

performing future analyses of the relevant institutional factors that differ considerably across the individual settings." (p.57 – 58)

An attempt has therefore been made in this thesis to subject aspects of the theory referring to the organisation and behaviour of producer cooperatives, to empirical scrutiny using evidence from the U.K. The central theoretical stances which have been investigated include issues of internal organisation, the objective function of the labour – managed firm, growth, degeneration and self – exploitation.

### 1.3 Organisation and Scope of the Thesis

The thesis examines some important parts of the theoretical literature surrounding the labour – managed enterprise and subjects them to testing and empirical observation. In this way a fuller understanding of the U.K. cooperative sector and of participator arrangements in general is achieved with pointers for future research being provided. The theory and issues underlying this approach are based on Williamson's (1980) notion of hierarchy, the neoclassical literature surrounding perverse supply effects and extension of that examining the nature of the cooperative objective function, growth, managerialism and degeneration and the nature of self – exploitation.

Unlike many traditional theses the approach taken has not been to examine all the theory and then subject it to empirical analysis, but rather to build up a picture of the U.K. cooperative sector by an examination of key areas of theoretical analysis. A logical structure is taken along this road, beginning with an examination of the internal structure of the firm, examining its actual behaviour and ending up with an examination of issues connected with the external environment.

Most of the empirical work contained in this thesis is derived from a data set of 78 producer cooperatives in the U.K. Details of survey design, data collection and a broad overview of the characteristics of these cooperatives are contained in chapter 2.

Chapter 3, using the approach associated with Williamson (1980), examines the internal structures of and relative efficiency of labour-managed and capitalist production. In critically appraising the work of Alchian and Demsetz (1972) and Williamson (1975, 1980) and looking beyond this paradigm both theoretically and empirically, efficiency and organisational attributes of U.K. producer cooperatives are examined.

The theoretical underpinnings of a neoclassical optimising approach to the labour-managed firm are examined in chapter 4. These are

extended to show that the Ward – Vanek Illyrian framework is based on restrictive assumptions. By examining the objectives and motivations of the cooperative movement, based on the idealised cooperative defined by Mellor et. al. (1988), a picture of the diverse nature of the cooperative objective function is built up.

Chapter 5 attempts to make a contribution to the participation – performance nexus and to further discuss the supply – side constraints assumed by Illyrian analysis by examining the performance of manufacturing cooperatives in the guise of growth aspirations and actual growth rates. Probit analysis is used to find the characteristics of the enterprise which make it more probable that it will have high growth aspirations. Following this there is an extension of the analysis which examines behavioural patterns associated with political motivation in the cooperative enterprise. Much of the impetus for this analysis comes from the criticism levelled at the Western cooperative movement by Daudi and Sotto (1985).

Chapter 6 examines the reasons why cooperatives may adopt a managerial structure within their organisation. In particular two hypotheses are tested. Firstly, that management structure will increase with the size and complexity of the enterprise and secondly, that managerialism will increase over time because of a tendency for

cooperative firms to degenerate towards capitalist forms.

In recognising that the cooperative is often a fringe firm dominated by larger capitalist enterprises, chapter 7 examines the nature of the self-exploitation within the cooperative often associated with this scenario. In fact two scenarios are examined; one where the cooperative has large capitalist competitors and the other where it is dominated by a large buyer of its output.

The issues raised in the theoretical literature and in the empirics discussed in the thesis are re-examined in chapter 8 by reference to six case studies of cooperatives. The emphasis is on illustrating the complexities and interrelated nature of much of the preceding discussion. Finally some conclusions are discussed in chapter 9.

In all the areas just listed, my intent has not been to provide an exhaustive and all-encompassing review of all the theoretical literature surrounding the cooperative enterprise. Neither has it been my intention to squeeze every drop of information out of the data since the primary objective has been to test and at times challenge common theories and assumptions about the labour-managed firm. Not surprisingly it has been impossible to reach definitive answers on the range of issues tackled. Nevertheless it has been possible to question



accepted theory, offer some alternative modelling approaches and seek to describe and explain more fully aspects of the organisation and behaviour of producer cooperatives. In doing so, some attempt has been made to extend the analysis beyond the boundaries of pure economics (whatever they may be) and consider facets of participation provided by other disciplines.

## **CHAPTER 2**

### **METHODOLOGY AND DATA**

#### **2.1 Introduction**

In analyzing aspects of the organisation and behaviour of U.K. producer cooperatives, the approach taken in chapters 3 to 7 has been to review and assess the underpinnings of the theoretical literature on the labour – managed firm (LMF), beginning with workplace specific or internal aspects of the firm and progressing towards more external factors. Key issues in the debate surrounding the LMF are examined and some basic hypotheses based on the discussion are tested. In some ways the approach may therefore be seen as an attempt to

verify or refute some common theoretical underpinnings in the literature surrounding the labour – managed firm in Western economies. Some conclusions are reached, but this type of investigation should never be seen as exhaustive, indeed many suggestions for future research are made throughout the thesis and in the final chapter. The general aim in using the data has been to examine the key issues in the debate surrounding the cooperative firm. Statistical analysis is therefore used to test common hypotheses. It has not been my primary aim to examine every possible relationship within the data since if these are not founded in theory they may be spurious. Nevertheless many interesting, and unexpected, relationships are uncovered.

The boundaries between economics and other disciplines in the social sciences are rather vague and indeed overlap and it has not been my aim to concentrate on only mainstream economic analysis. Whilst neo – classical optimisation models play an important part in the thesis so do organisational aspects of the firm, radical perspectives on the firm and on the division of labour, and socio – political analysis. Superimposed on all of this is an empirical, largely statistically based analysis of data on 78 producer cooperatives collected by the use of questionnaires. This is supplemented by six case studies, (chosen because of their diversity), of cooperatives in chapter 8.

## 2.2 Previous empirical investigation

The degree to which any theory can be supported or refuted relies on the empirical evidence available. Other than anecdotal evidence, in the case of producer cooperatives, this is in short supply. One of the problems is that the cooperative sector has always been relatively small in the U.K. and has also comprised small firms. In an attempt to add to the empirical evidence available it was the intention of this research to mount a survey of a representative sample of cooperatives, operating in the manufacturing sector of the economy. Two previous attempts at doing this have provided interesting information but naturally sample sizes were small.

A survey of 57 cooperatives who were members of the Industrial Common Ownership Movement (ICOM) has been carried out by Chaplin and Cowe (1977). Their questionnaire was designed to elicit information about how cooperatives started and how they operated, together with the kind of problems met both in starting up and in subsequent operations. A response rate of 57% was achieved without any follow-up requests. The survey indicated that the problems involved in setting up a cooperative were no different to those encountered in establishing a conventional small business. Cooperatives

which had been established close to the time of the survey tended to receive a significant amount of help from government finance and loans from I.C.O.F. and other cooperatives. The average size of membership investigated was nine members.

One aspect of the study which is particularly relevant to the research undertaken here concerned the organisation of the cooperative. It revealed that many cooperatives appeared, at least to the purist, to fail as cooperatives in one or more of the crucial areas of control, job allocation and wage payments. Over a quarter of the cooperatives did not indulge in communal decision-making and in three cases those responsible for taking the decisions were not elected by the workforce. One third of the established cooperatives had no restrictions at all on differentials. Thus commonly elites developed within the workforce against the ideals of longer term cooperation. Chaplin and Cowe also note that those cooperatives "representative of alternative movements seem less concerned about ownership and indeed with financial success" (p.50).

In a postal survey of economic aspects of worker cooperatives in Britain, Wilson (1982) analyzed 113 cooperatives. In addition to the questionnaire responses, data was supplemented by information from Companies House and the Registry of Friendly Societies. An

unexpected outcome was that many cooperatives proved to be multi-functional. For example one cooperative surveyed described its activities as:

"... a nucleus of people looking for friendly, non-sexist, socially responsible, flexible work."

and listed their trades along a range from building to dressmaking. This was typical of cooperatives who had been established as alternatives to a more traditional firm, seeking to escape more conventional work relationships, primarily promoting broader causes. This perhaps suggests a correlation between strength of ideological input and diversification into a range of activities.

Generally the cooperatives surveyed were seen as having broader objectives than their capitalist counterparts. Of the firms surveyed, some were mainly concerned with achieving a desired 'quality of working life' and many placed much emphasis on political or religious ideology. Fifty-eight percent of the survey saw stability of employment and job security as being a prime objective.

### 2.3 Data Collection

The two questionnaires used in this research represent an attempt to collect original data capable of providing empirical evidence able to support or refute hypotheses based on the general theoretical areas discussed in the introductory chapter.

The first questionnaire (a copy of which is contained in the appendix A) was sent to the 216 manufacturing cooperatives listed in the National Directory of New Cooperatives and Community Businesses (CDA, 1986). The definition of manufacturing adopted by the CDA seems to be very broad and the analysis in this thesis prefers to use the term producer cooperative which would include any enterprise which makes something tangible. The survey was limited to producer cooperatives for a number of reasons. These included, wanting data to reflect the nature of the theoretical literature, the largest part of which is about participatory production, not wanting to replicate concurrent work done on wholesaling and retailing by Jefferis (1988), and not wishing the area of analysis to become too wide and unwieldy for analytical purposes.

Seventy – eight questionnaires were returned completed and a further thirty five were returned marked 'gone – away' and eight returned not

completed. This represents a return rate of 56% and a response rate of 36%. This return rate includes one follow-up contact with the 216 cooperatives by way of a reminder letter and further copy of the questionnaire. Of the seventy-eight responses, sixty-six were responses received before the reminder was sent out and twelve afterwards. Following Plosser et. al. (1982) this has meant that a test of survey bias was possible by examining the two sets of responses as independent samples. It can be shown (see appendix C) that there is no evidence to suggest that the two samples come from a different population and therefore no evidence of survey bias.

The high number of 'gone-away' returns is not necessarily indicative of closures. Contact with local CDA's seems to imply three main reasons for this relatively high figure:

1. Some cooperatives had entries put into the directory before they started trading and in the end were actually never established;
2. Some cooperatives had changed address without having their mail redirected; and
3. Some cooperatives had closed.



Because of a lack of detailed information held by most local CDA's it is not possible to estimate the proportions falling within each of these categories despite telephoning several CDA's for help.

Neither did the Directory only include addresses of "new" cooperatives. Many were indeed established enterprises which had been operating, in some instances, for over twenty years. Thus the survey is not based on only recently established cooperatives.

Wherever feasible respondents were asked to rank their responses in some order of importance. In some respects the questionnaire may not have been as comprehensive as desirable, but there is a careful balance to be kept between accessibility, and therefore response rates, and the length of the questionnaire. Nevertheless the response rate seems to be slightly lower than previous surveys perhaps reflecting the questionnaire's relative detail.

The second questionnaire (see appendix B) was sent one year after the first to the sixty cooperatives who had responded to the first and had supplied their addresses. This elicited 46 responses. On this occasion there was no reminder. The lower response rate may reflect this, but also reflects the nature of the questionnaire. In retrospect

there were two problems. One was that the questionnaire did ask for personal information about the members of the cooperative, but at the time of compilation it was intended that this information should be used extensively. The second problem was associated with some aspects of the questionnaire not being as clear as they could have been. Although a covering letter was sent to the cooperatives explaining some points; in retrospect this may not have been enough.

The second questionnaire was sent only to those cooperatives which had responded on the first occasion since part of the reason for the questions asked was to compare responses with those of a year earlier and to compare firms' growth aspirations with their estimated (actual) growth rates.

#### 2.4 General Information

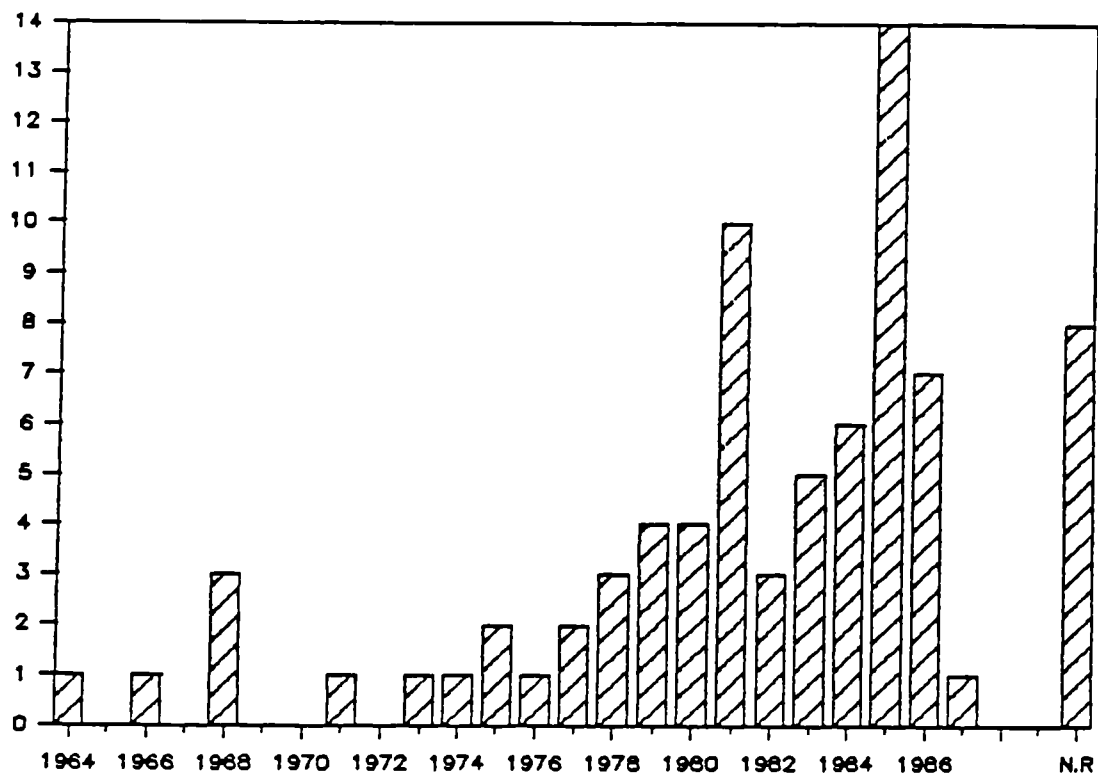
The size and growth of the cooperative sector was discussed in the introduction. Its rapid growth in the last fifteen years in particular though means that the cooperative sector is relatively young. The sample of cooperatives used in this research tends to mirror that rapid growth. A distribution showing the establishment dates of the cooperatives studied in this research is given in figure 2.1.

The cooperative sector is essentially a subset of the small business sector. Estrin (1985) notes that the modal size of a U.K. cooperative is about 4 members and Hobbs (1989) comes up with a mean figure of 7.9. The sample of cooperatives used in this research has a modal size of five with a mean of 10.4. However, if the largest cooperative (producing knitwear on a "cottage industry" basis and established in 1974) with a membership 160 is excluded then this mean falls to 8.4 which is not significantly different to Hobbs' estimate. A distribution of cooperatives responding to the questionnaire by number of members is presented in figure 2.2.

It seems useful at this point to present an overview of some of the key data collected with selected cross – tabulations in order to provide a "feel" for the data. Since some observations are discrete and in most cases we have no real estimate of variance strict statistical tests of significance are not possible and are therefore not presented. For the purpose of this chapter this poses few problems since the presentation is for description alone in order to paint a broad picture. More robust statistical analysis is presented in the following chapters.

Figure 2.1

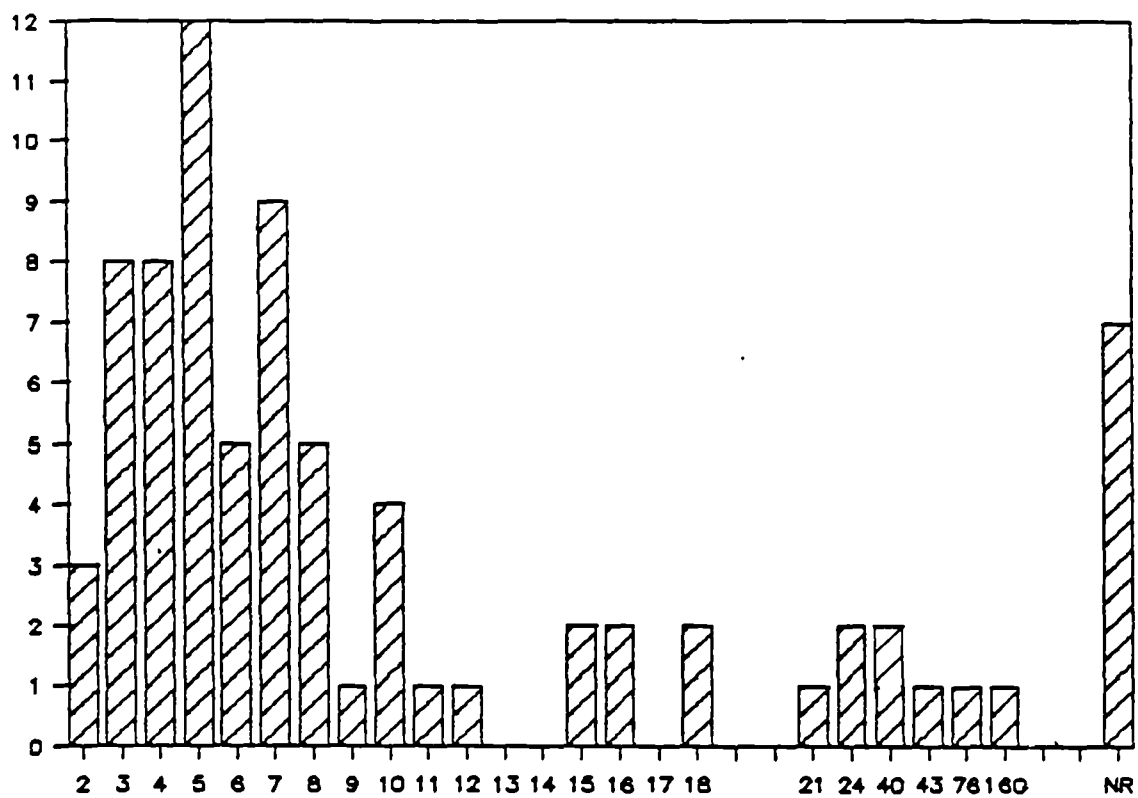
DISTRIBUTION OF ESTABLISHMENT DATES



NR = non-respondents

Figure 2.2

DISTRIBUTION OF COOPERATIVES BY SIZE OF MEMBERSHIP



The regional distribution of cooperatives in the survey based on addresses supplied (60 enterprises) is as follows:

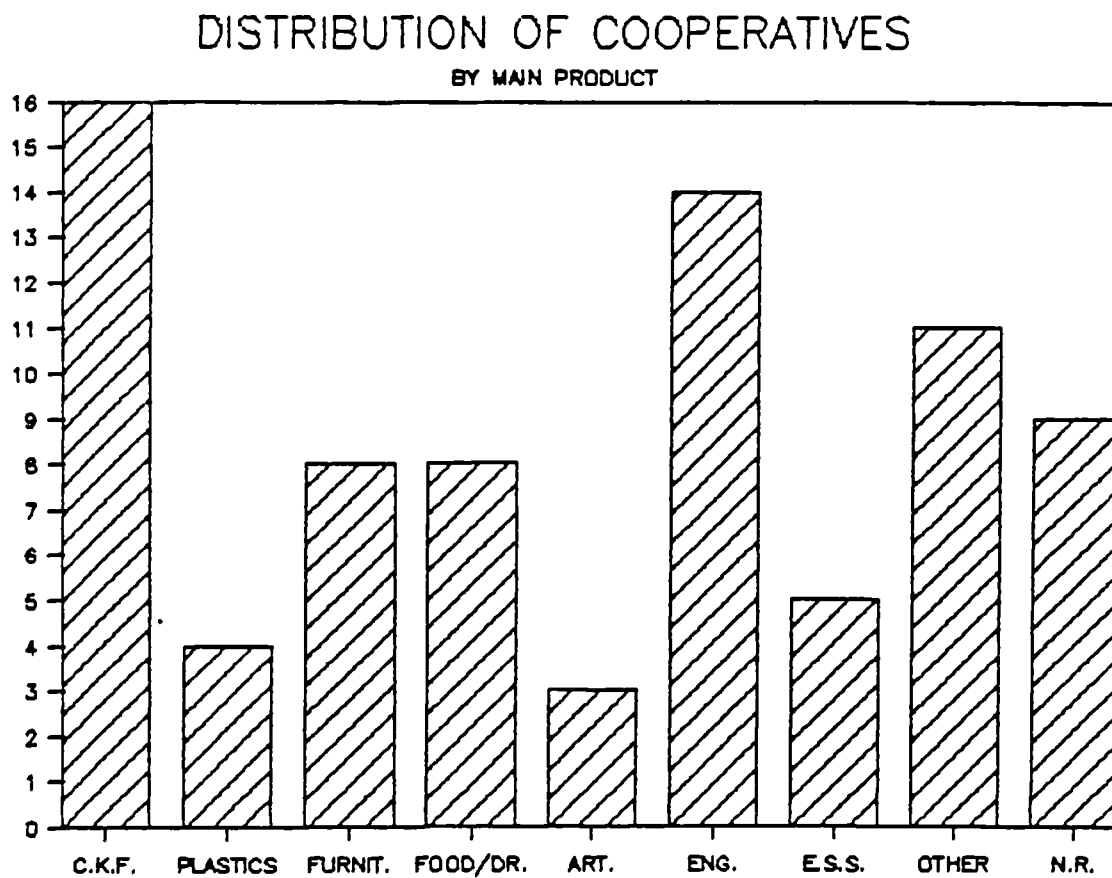
Table 2.1: Regional Distribution of Cooperatives Surveyed

Location	Number of cooperatives	Percentage of cooperatives	Hobbs' (1989) estimate (%)
North	18	30	26
Midlands	13	22	17
Wales	2	3	5
Scotland	9	15	7
London	9	15	26
South	9	15	18
N. Ireland	0	0	1

Thus the survey undertaken here looks broadly consistent although there is a bias away from London and the South towards the North. One might hypothesise that 'Northerners' are more likely to complete questionnaires!

Within the producer cooperative framework a broad sectoral classification is possible. This does not represent any standard Industrial Classification, but is based on groupings common in the cooperative sector:

Figure 2.3



Key = C.K.F. = Clothing, Knitwear and Footwear

FURNIT = Furniture

FOOD/DR = Food and Drink

ART = Artistic Material and Graphic Art

ENG = Engineering

E.S.S. = Electrical, Scientific and Software

N.R. = Non-Respondent

Table 2.2: Sectoral Distribution of Cooperatives Surveyed

	CKF	PLAST	FURNIT	FOOD	ART	ENG	ESS	OTHER
North	3	0	3	2	1	4	1	1
Midlands	3	2	2	1	1	4	0	1
Wales	1	0	1	0	0	0	0	0
Scotland	2	1	0	1	0	2	1	1
London	3	0	1	2	1	0	2	2
South	3	1	0	2	0	2	1	1

Even though these numbers are too small to lead us to any conclusions, it might be suggested that table 2.2 reflects a typical regional split with engineering industry being found mainly in the North and Midlands and electrical, software and scientific business being based in the South. The distribution of cooperatives in the largest area surveyed, clothing, knitwear and footwear, is more evenly spread.

One of the key questions in the first questionnaire surrounds the firms' reasons for establishing itself as a cooperative and the subsequent aims of the cooperative. Table 2.3 examines the establishment factors:



**Table 2.3: The Importance of Factors in the Establishment of the Cooperative**

	Number of cooperatives reporting the factor to be:				Numbers reporting this to be the most important factor
	Very Important	Important	Not Important	NR	
Religious reason	5	4	66	3	5
Political reasons	16	17	39	6	6
A redundancy situation/ factor closure	19	15	38	6	9
A job creation programme	18	11	40	9	9
The provision of a particular product	31	19	21	7	5
The availability of grants	16	19	38	5	3
The desire for a pleasant atmosphere at work	35	27	12	4	7
Wanting to work for oneself	38	21	12	7	5
Support of a C.D.A.	9	21	39	9	3
A desire for equality with fellow workers	28	30	14	6	23
Others	5	0	0	73	1*

NR = No Response

\* = Objective stated was the provision of shared childcare support

Simple correlations between the reasons for the establishment of the cooperative provide some interesting results:

1. Of the 16 cooperatives who listed political reasons as being very important, half or more also reported the provision of a particular product, atmosphere at work, working for oneself and equality with fellow workers as being very important.
2. Of those recording working for oneself as being very important, two – thirds thought that atmosphere was very important and half stated that equality was very important.
3. Two – thirds of those stating atmosphere was very important also saw working for oneself and the issue of equality as being very important.
4. Over half of those who thought that the provision of a particular product was very important also recorded atmosphere and working for oneself as being very important.

Thus there seems to be a number of cooperatives whose objectives revolve around matters of politics, equality, working for oneself, atmosphere and the provision of a particular product. We find that 39 cooperatives (exactly half) saw two or more of these factors as being very important. In some respect therefore we are able to split the sample in half according to objective. On the one hand there seem to be those cooperatives interested foremostly in non – financial objectives and objectives not aimed primarily at the provision of employment. These cooperatives seem to be largely politically motivated. On the other hand there are those who see employment for members and financial viability as the dominant objectives and might be seen as less politically motivated. This split between cooperatives following non – financial objectives and those following broadly financial objectives is one of the fundamental distinctions used in the thesis.

Question 3 of the questionnaire attempted to reveal something of the aims of the cooperative at the time of the survey. This was left to the respondents to word, but nevertheless there are common areas of response. These are reported in table 2.4. Certainly there appears to be considerable overlap with the objectives stated above (as one might expect) and comparison of original objectives with present aims seems largely consistent. There is however a much larger emphasis put on employment in the responses; particularly on security of employment.

This might be a reflection on a decade of high unemployment and job insecurity.

Table 2.4

Aims of the Cooperative:

General area of Response	Number of Coops reporting this aim.
The provision of employment/security of employment	26
The production and promotion of socially worthwhile goods	24
Promoting the cooperative sector	13
Profitability and good rates of pay	12
Training and skills development	12
Viability of the cooperative/production to make a living	10
Equal status for women and minority groups	9
Growth	8
High quality workmanship/creativity	8
Working with a responsibility towards the community	8
Provision of good working conditions	7
Non – exploitation	6
No response	20

Thus whilst for many the original intention of the cooperative was not necessarily to create jobs, certainly the maintenance of those jobs once created is important. Again featuring as an important objective is the production of particular (socially useful) products. This was particularly the case with cooperatives engaged in the production of food and drink and in clothing, knitwear and footwear.

We can examine links between location and objectives by looking at some simple cross-tabulations. This is done in table 2.5 but given the size of the subsets very little difference can be claimed.

Table 2.5: Objectives and Locations of Cooperatives Surveyed

Location/Objectives	Broadly Financial Non – political	Broadly Non – financial and Political
North	8	10
Midlands	5	8
Wales	0	2
Scotland	4	5
London	5	4
South	6	3
Unknown	11	7
Total	39	39

Another fundamental distinction used in this research surrounds the growth aspirations of the cooperative. This mirrors a considerable amount of work on growth characteristics of the labour – managed firm following the work of Ward (1958), Vanek (1970) and others (for a review see Ireland and Law, 1982 and Bonin and Putterman, 1987). As a result of questions 4, 5 and 6 in the survey we may categorise the growth aspirations of the 78 cooperatives into those expecting high growth (over 10% per annum) and those expecting low growth (less than 10%) or no growth. The figure of 10% was chosen simply so that firms could easily quantify and envisage this sort of growth rate when completing the questionnaire. The distribution of responses is as follows:

Table 2.6: Aspirations of Growth Over a 3 year Period

	Turnover	Employment Incomes	
High Growth	55	39	47
Low Growth/No Growth	23	39	31
Total	78	78	78

The links between growth aspirations and objectives are examined in detail in chapter 5.

The use of management in cooperatives may seem surprising to many since it may be seen as against a general principle of egalitarianism, but in the survey conducted for this research, 42 cooperatives claimed to have some kind of management structure, 30 did not and there was no response from 6 returns. Quite what sort of management structure existed can be seen from the following table:

Table 2.7: Decision Making in the Cooperative Enterprise

Cooperatives reported the following strategies for decision making: number of cooperatives:

On a day to day basis

A single manager makes the decisions	22
A management team makes the decisions	20
All members decide democratically	29
Other (not specified)	1
Non – respondents	6

When deciding on longer term policy

A single manager makes the decisions	0
A management team makes the decisions	9
All members decide democratically	61
Other (not specified)	2
Non – respondents	6

Where applicable, were managers democratically elected ?

No	7
Yes	27
Not clear / no response	8



Looking again at regional distributions gives us the following picture:

Table 2.8: Location and Management Structure: Cooperatives Surveyed

Location/Management	Management Structure	No Management Structure
North	9	9
Midlands	8	5
Wales	0	2
Scotland	5	4
London	7	2
South	7	2
Unknown	6	6
Total	42	30

This may suggest that northern cooperatives are more egalitarian than their southern counterparts but again we must recognise that the subsets are very small.

A small amount of data derived from the questionnaires has not been used in this thesis. There are two main reasons for this. Either during statistical processing it added nothing to the discussion, or, it was collected in the anticipation that it might be used but was not subsequently. The latter explanation reflects the fact that with research of this kind one often sets off on investigations which turn out to be 'blind alleys'. Research falling into this category includes an attempt

to model entry and exit by the cooperative firm into markets dominated by large capitalist firms, modelling the internal structure of the cooperative using characteristics of members such as age and examining the various effects of profit-sharing legislation on the cooperative.

It should be stressed however, that these areas of research have not been completely abandoned and do represent possible areas for future research, particularly where additional data can be collected. In the case of profit-sharing for example, the survey was probably circulated too soon after the government's profit-related pay legislation was introduced to bring about usable responses. However, now may be a time to reopen that line of investigation.

## 2.5 Statistical Analysis

Much of the statistical analysis in this thesis is based on an examination of the behaviour of the cooperative where there are two alternatives. For example, in chapter 5 we examine the characteristics of firms who have high growth aspirations rather than low growth ones. Thus we have an analysis of a single dichotomous variable such that the left hand side of the equation can be represented as a binary digit.

Thus we are modelling discrete alternatives in limited dependent variable models.

Statistical analysis of this type of behaviour is complicated by the fact that such behaviour must be described in probabilistic terms. That is, models describing choices from a limited number of alternatives attempt to relate the conditional probability of a particular choice being made to various explanatory factors that include the attributes of the alternatives as well as the characteristics of the decision makers. The explanatory variables can be discrete or continuous.

Since our primary concern is to interpret the dependent variable as the probability of making a choice, given information about the firm's attributes, it is reasonable to utilize some notion of probability as the basis of the transformation. Since we would like the transformation to be monotonic, the use of the cumulative probability function is most suitable. The probit model is associated with the cumulative normal probability function and this model using maximum likelihood estimation techniques has been used in an attempt to model microeconomic behaviour.

The probit model assumes that there is an underlying response variable  $y_i$  defined by the usual regression framework as

$$y_i = \beta'x_i + u_i$$

with  $E(u_i) = 0$ .

The conditional expectation  $E(y_i|x_i)$  is equal to  $\beta'x_i$ . This has to be interpreted in this case as the probability that the event will occur given the  $x_i$ . The calculated value of  $y$  from the regression equation will then give the estimated probability that the event will occur given the particular value of  $x$ .

An alternative approach in the case of dichotomous variables would be to use discriminant analysis. If the independent variables are normally distributed, the discriminant-analysis estimator is the true maximum likelihood estimator. However, if the independent variables cannot be guaranteed to be normally distributed the discriminant-analysis estimator is no longer consistent (see Maddala, 1986). In these circumstances though the probit maximum likelihood estimator is consistent and therefore more robust. Press and Wilson (1978) calculated the probability of correct classification for the two estimators in a number of empirical samples and find that in general, with limited information about a population probit maximum likelihood estimation is to be preferred. Thus in this thesis, because we cannot necessarily

guarantee normal distributions a probit approach is adopted.

Thus we are assessing the probability that one variable will increase the likelihood of an event occurring. As is common with limited dependent variable analysis with small datasets (see Maddala, 1986) it is the sign of the explanatory variable which we have concentrated on in the analysis, rather than a more detailed interpretation of its magnitude.

## **CHAPTER 3**

# **HIERARCHY AND THE INTERNAL ORGANISATION OF LABOUR MANAGED PRODUCTION**

### **3.1 Introduction**

We begin the detailed analysis in this thesis with a consideration of the internal aspects of the labour – managed organisation. Central to the debate on organisation is a consideration of the structure of the firm in terms of hierarchy. Whether or not hierarchy is important in the behaviour of the firm has been the subject of much debate. Moreover, whether an arrangement where labour hires capital or capital hires labour is superior in terms of efficiency has been discussed ever since

Samuelson (1957) observed that in a perfectly competitive market it doesn't really matter who hires whom.

We know that in the main in Western economies capital hires labour. Is there a sound efficiency rationale for this condition, or is hiring explained by considerations of power and control over political processes? This is the central question posed by economists such as Williamson (1980). On a critical note, Lindblom (1977) for example, contends that owners of capital have become the owners of the enterprise not by logic but by history.

On the issue of the efficiency of hierarchy (which ought to be seen as a separate issue to that of ownership), Marglin (1974) points to hierarchy as being the organizational device by which managers and capitalists exploit workers. But at this stage there seems no reason to dismiss the possibility of a degree of hierarchy in the labour-managed firm. If managerial skills, for example, are able to make the firm run more smoothly without upsetting the democratic process then management may have something to offer. Adam Smith himself in recounting pinmaking technology (1904) was imprecise about organisational and ownership relations that existed amongst workers in his small factory. But his discrete analysis between each man working independently and separately, and a Taylorist mode is rigged in favour

of the latter. Indeed as Marglin (1974) points out the division of labour typified in Smith's scenario was the result of a search not for a technologically superior organisation of work, but for an organisation which guaranteed an essential role in the production process for the entrepreneur.

Apart from Smith's implicit support for the creation of hierarchy additional or related advantages are that hierarchy permits the benefits of innovation to be appropriated more completely and serves to check deceits (Marglin 1974). This implies a degree of discipline which is involuntary on the part of the worker. Some consequent disutility of work may then offset output gains attributable to that discipline. Although, we should note once again that if a degree of supervision exists in the labour-managed firm by consent then there may be considerable benefits to this sort of self-discipline.

Thus hierarchy may lack compelling efficiency rationale in the capitalist firm but ironically have something to offer the democratic cooperative form of organisation. The view that hierarchical work modes are therefore inefficient and that non-hierarchical modes result in greater work satisfaction (Bowles and Gintis, 1976) may be oversimplistic for our analysis.



The familiar neoclassical production function framework leads to the prevailing tendency in economics to attribute efficiency differences to differences in technology. This approach neglects an analysis of alternative modes of production including broadly egalitarian, cooperative modes. Marglin (1974) argues that many issues can be tested experimentally. Surprisingly, therefore, Williamson (1980) makes no attempt to do this when examining alternative modes, preferring an abstract assessment of the transactional properties of stylised organisational forms. Nevertheless, Williamson's framework does permit a priori analysis, thus delimiting some important empirical issues.

The purpose of this chapter is therefore to critically appraise the work of Alchian and Demsetz (1972) and Williamson (1975, 1980) in their establishment of a framework within which to examine the relative efficiency of the LM – firm, and to use this framework as a basis to examine the efficiency attributes of U.K. worker cooperatives. Section 3.2 therefore outlines this framework and points out its associated weaknesses and shortcomings. It will be seen, for example, that some very restrictive assumptions are made. Section 3.3 looks beyond the Williamson paradigm towards other issues of interest in the efficiency debate. Section 3.4 examines previous attempts to assess the relative efficiency of participation. Section 3.5 uses the framework to examine the efficiency attributes of the sample of 78 worker cooperatives. This

includes a re-examination of Williamson's (1980) efficiency rankings based on a sub-sample of 46 of these firms. Finally, some concluding remarks are made in Section 3.6.

### 3.2 Organisational Form and Hierarchy

The possibility that labour-managed (LM) and profit maximising (PM) production might have differing organisational properties is commonly examined in the literature in terms of efficiency. There are a variety of suggestions as to possible sources for this differential which, following Williamson (1980), can be categorised into four parts.

Firstly, the two organisational forms may have different incentive and monitoring properties. In other words workers may be motivated and monitored in different ways. Most of the debate centres around supply of effort but note must also be taken of other aspects of performance such as product quality. Secondly, there is a need to examine the role of what Williamson (1980) calls "assignment" tasks. These include allocating workers to jobs to which they are most suited. The ability of labour to assign itself to the most appropriate tasks in the labour-managed firm being a key issue. Thirdly, as Williamson notes organisations may differ in terms of "atmosphere". It may be argued, for example, that profit maximising production alienates workers and that

the democratic nature of a labour – managed firm may lead to greater feeling of self – determination. Fourthly, the assertion that, because transactions are not conducted under conditions of perfect competition bargaining costs may differ between the two organisational forms needs to be considered. For example where wage bargaining is concerned, the profit maximising firm is likely to face significant transactions costs which do not arise for the labour – managed organisation. These four attributes are likely to determine the relative efficiency of each organisational form.<sup>1</sup>

### 3.2.1 Incentives and Monitoring

Alchian and Demsetz (1972) analyse incentives and monitoring in terms of team production where gains are available to factor owners. The difficulty is in determining each individual worker's contribution to the total output of the team because that output is not simply the sum of outputs produced by each of the inputs. If an individual worker can reduce his/her effort without a proportionate reduction in personal income, an individual incentive exists for *shirking*. In other words, if the production function is not separable there is an incentive for each member to shirk. Thus a member can gain the full advantages of

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<sup>1</sup> A fifth attribute which may have an influence is that of the relative availability of investment. But Stewart (1986) and Ireland and Law (1982) show how the traditional problems associated with LM – firm financing can be mitigated. Thus for now this is ignored.

shirking but pay only a proportion of the cost; the remainder being borne by the rest of the workforce. Equally, if the benefits of increased effort cannot be fully captured by the worker, but are in effect shared by the whole workforce, then an inadequate incentive exists to increase effort. Alchian and Demsetz argue that the profit-maximising firm is the organisational form best able to circumvent this problem and minimize the degree of shirking for the following reasons. Firstly, a specialist is assigned the task of monitoring. He/she has an incentive to monitor because he/she is the residual claimant. Secondly, the monitor is effective because he/she has the power to discipline shirkers and ultimately to terminate any contract.

There are a number of criticisms which can be applied to this. Firstly, there may be a specialist monitor in the PM-firm but just how effective he/she is is open to question. In particular, Alchian and Demsetz consider only the incentive to monitor, other factors must also be considered. In particular, Putterman (1984) points out that the technology of monitoring is important, as well as the process of translating observations into pay-out schedules, the effects of monitoring arrangements upon worker motivation, well-being and behaviour, and the direct costs of monitoring. At a technological level for example, whether centralised monitoring or self-monitoring will be more efficient will depend on the nature of the tasks, the spatial

dimensions of the workplace and according to Ireland and Law (1988), the external environment. Some activities will allow individuals to work and to observe each other's performance simultaneously. In other words output and monitoring are likely to be joint products.

In the LM-firm each worker can be regarded as a residual claimant and therefore each has an incentive to monitor other members. Monitoring by team members will take place up to the point where the marginal gains from monitoring other members is equal to the marginal costs. Within the LM-firm it is likely that, because of the close proximity of workers and similar aims, the marginal cost of monitoring will be close to zero. Thus the group monitoring itself may have a superior outcome in any case.

Ireland and Law (1988) examine management design in the LM-firm in terms of monitoring the effort of the individual worker or member. They suggest that in the LM-firm a higher cost of monitoring leads to less effort per worker and that management design is, in general, endogenous depending on firm type and economic environment. The implication here is that we should not necessarily expect an egalitarian type structure in the cooperative enterprise if there is good reason to adopt some sort of management structure as a result of the environment in which the firm works. We may therefore expect there

to be correlation between industry type and management structure. This is examined in detail in chapter 6.

Secondly, in larger PM – organisations, with a divorce of ownership and control, the monitor could well not be the residual claimant and thus has the incentive to shirk him/herself.

Thirdly, Alchian and Demsetz downplay the fact that for many workers, being monitored itself has psychic costs. The effects on employee performance and morale, as Williamson (1975) notes, may argue against excessive monitoring and frequent revisions of reward schedules. Alchian and Demsetz also claim that no authoritarian control is involved; the arrangement being simply contractual. This is clearly not the view of others (e.g. Baran and Sweezy, 1966) claiming significant problems and psychic costs associated with authoritarianism.

Putterman (1984) subjects Alchian and Demsetz's argument to perhaps the most important criticism given the empirical work in this thesis. If in fact there are benefits to having a specialist monitor then there is nothing to prevent the LMF appointing one. This person is likely to be at least as effective as a manager doing the same job in the PM – firm. Indeed in table 2.7 (page 37) we saw that the existence of managers in cooperatives is not uncommon.

In order to fulfil his/her functions efficiently, say Alchian and Demsetz, the monitor must also have the right to hire and fire owners of cooperating inputs, which may rule out team democracy. But Stewart (1986) carefully examines the sanctions which are applied to workers who shirk. In the PM – firm the instrument available to the monitor is the ability to terminate the contract. This may, however, involve costs and if the worker is aware of these then he/she knows that it is safe to engage in some degree of shirking. In the LM – firm, on the other hand, where workers all directly suffer from shirking by an individual, an additional and relatively costless sanction, namely peer group pressure, is available. Chinn (1979), for example, describes how "team cohesion" serves to stimulate labour supply in Chinese agricultural collectives. Sen (1966) also points out that in a tightly knit group of workers, altruism may also play an important part. Again in chapter 2, table 2.3 (page 30), we saw that a desire for a pleasant atmosphere at work and a desire for equality with fellow workers were seen as key reasons for the establishment of a cooperative.

### 3.2.2 Williamson's Notion of Hierarchy

Williamson (1975, 1980) argues that standard microeconomic theory fails to confront the issues of organisation, but, in opposition to the later work of Ireland and Law (1988), argues that hierarchical modes of organisation are generally dominant because of their comparative efficiency.

In contrast to Alchian and Demsetz, Williamson does emphasise that monitoring of workers and the revision of rewards can create an atmosphere which has negative effects upon the employment relation. If there are disputes over monitoring observations and reward adjustments, these are costly in time and goodwill and the atmosphere created is one in which employees perform their jobs in a perfunctory rather than consummate fashion.

Williamson's concern with atmosphere and with non-pecuniary attributes of working relations, nevertheless leads him to a relatively sympathetic view of cooperative modes of work organisation. In small enterprises, such as characterised by the UK cooperative sector, in which membership is self-selecting and where mutual monitoring can be effective, a cooperative enterprise might be more efficient than a hierarchical one. But Williamson argues that democratic decision-



making becomes inefficient as enterprise size increases. (This issue is examined in more detail in chapter 5.) As the volume of information required by decision-makers expands, specialization between managerial and other roles becomes imperative. Efficiency is thus served best when central information collection and decision-making is done by "one or a few individuals who have superior information processing capacities and exceptional oratorical and decision-making skills" (Williamson, 1975, p.52).

Williamson evaluates a number of organisational forms. The traditional worker-manager relationship Williamson discusses as the authority relation and the worker-worker (or member-member) relationship as the peer group. The former represents hierarchical capitalist control and the latter collective democratic control and can thus be seen as corresponding approximately to PM-organisation and LM-organisation respectively. Williamson (1976 and 1980) asserts that, while the democratic peer group possesses superior sociological attributes, it is inferior to hierarchical alternatives because it fails to assign workers to their most productive uses. He ignores the fact that some degree of hierarchy may exist, through the adoption of a management structure, in the LM-organisation.

Williamson considers a number of efficiency criteria and awards a binary score to each. Among the criteria are the following incentive attributes together with the scores corresponding to the authority relation and peer group.

	<u>Authority Relation</u>	<u>Peer Group</u>
Work intensity	0	0
Care in equipment utilisation	1	1
Local shock responsiveness (reactions to machine breakdown or worker illness for example)	1	1
Local innovation (improvements to process made by individual workers or groups)	0	1
System responsiveness (the capacity to implement system innovations and respond to system shocks)	1	1

Table 3.1

The suggestion from the table is that the LM-firm has superior incentive properties. Surprisingly, work intensity is scored as 0 under the LM-organisation although there exists evidence to the contrary (see below).

Because a binary score is used there is no measure of intensity between the scores. But any extension of the scoring scheme is likely

to find little acceptance with scores varying with the scorers' value judgements and perceptions. A detailed rationale for the assignments is reported by Williamson (1976).

### 3.2.3 Assignment

A key aspect of the debate revolves around what jobs workers do and how they are assigned to those various tasks. Williamson cites three types of assignment which organisations must undertake:

	<u>Authority Relation</u>	<u>Peer Group</u>
Station assignments (efficiency of assigning workers to tasks)	1	0
Leadership	1	0
Contracting (the capacity to contract with specialists able to serve across the production processes)	1	1

Table 3.2

Thus it is argued that in this respect the authority relation is superior. But a crucial factor would appear to be Williamson's strict requirement that in a peer group, leadership or management must be rotated among all the membership. Putterman (1981) points out that this would put the peer group at a disadvantage since it prevents specialisation. However, for our purposes there would seem to be no

requirement that the leadership role should rotate, preferring to accept that management may well be a skill developed or even bought – in by a LM – organisation.

Williamson further argues that the role must rotate to prevent the manager or managers becoming an elite because they have superior knowledge and are thus not answerable to peer group pressures. Supporting this Bradley (1980) in a survey of French and British cooperatives finds evidence that managers who were supposed to act strictly within a framework determined by workers, often did not, pursuing alternative managerial strategies.

But whilst we have to accept that some managerial discretion may be displayed this does not provide sufficient grounds for discounting the ultimate power of the workforce. Moreover because of this workforce power we can assume that any managerial discretion exhibited in the LM – firm will be less than in a PM – firm where a divorce of ownership and control is commonplace.

Stewart (1986) makes the further point that whilst recognising the possibility of gains from specialist decision – making, the potentially constructive role that workers may play should not be ignored. The argument is particularly relevant to performance with regard to local

innovations where open communication channels are important. Although Bradley (1980) finds that within any firm there appears to be an inherent propensity for management to withhold information. Thus any flow of information may not be two-way and additionally there may be an inherent obstacle to the feasibility of worker control pursued by strategies focusing on shop floor access to confidential information.

On the issue of assigning workers to tasks Williamson clearly ignores the possibility that members of the LM-firm are able to assign themselves to tasks to which they feel most suited. At the least there is likely to be consultation between managers and other members before assignment takes place. Moreover "staleness" is more easily prevented with workers able to suggest their own movement and rotation from one task to another.

Thus on the assignments where Williamson marks the peer group down we may, *a priori*, disagree with the ranking. Indeed there seems some reason to suggest superior outcomes for the peer group. Much of the problem here is associated with Williamson's notion of the peer group. It seems not to be just a worker-run enterprise in the sense that ultimate authority resides in the democratic vote of the membership, but rather, what Putterman (1984) calls a "utopian form of cooperative in which social, political and economic equality are sought through rotation

of members between all jobs" (p.178). This restrictive model seems not to mirror the typical cooperative in the U.K. as depicted in chapter 2.

### 3.2.4 Atmosphere

The standard economic model assumes that individuals regard transactions in a neutral manner. But in many situations it is likely to be the case that the exchange process itself is likely to be an object of value. Thus individuals are going to value the exchange relation, or "atmosphere". In this respect Stewart (1986) notes that modes of organisation are likely to differ non-trivially. Williamson (1975) himself notes that the peer group may be preferred to hierarchy in this respect – at least in small organisations. Levin (1982) makes the point that many studies of productivity fail to take account of "non-market input" of which atmosphere would be an example.

Baran and Sweezy have long claimed that capitalist organisation leads to poor atmosphere. For example they note:

"High level committees are entrusted  
with the discovery and specification  
of goals ... malaise deprives work of

meaning and purpose; turns leisure  
into joyless, debilitating laziness  
and destroys the very formation of  
bourgeois society, the family". (1986)

The poor atmosphere conditions associated with traditional capitalist  
production can easily lead to alienation. Fromm (1965) says that the  
individual worker is;

"an economic atom that dances to the  
tune of atomistic management".

and that capitalist managers

"Strip the worker of his right to think  
and move freely. Life is being denied,  
need to control, creativeness, curiosity,  
and independent thought are being balked  
and the result, the inevitable result is  
flight or fight on the part of the worker,  
apathy or destructiveness, psychic regression"  
(p. 115).

Williamson (1980) notes the claim that work in profit maximizing firms might be oppressive. What is surprising is that he sees work satisfaction as something to be set against organisational efficiency rather than as an element contributing to it. Thus Williamson himself fails to fully integrate atmosphere into his analysis of alternative organisational forms. This seems a major oversight given the emphasis put on atmosphere at work by many cooperative enterprises (see table 2.3, page 30).

It is to the psychologist whom we might turn, in order to help us establish atmosphere differences between labour–managed and profit maximising modes of production. This research suggests, according to Blumberg (1968), that utility derived from work depends upon the fulfilment of basic ego needs as well as material rewards. Participation, power and responsibility on the job, all contribute to the satisfaction of these ego requirements. Thus atmosphere is clearly an element contributing to the efficiency of the firm.

### 3.2.5 Bargaining Costs

Contracts are negotiated with a variety of parties but we are most interested in the initial contracting associated with the suppliers of labour. There seem to be several fundamental differences in this area.



Alchian and Demsetz (1972) regard the relationship between the employer and employee as being no different to that of grocer and customer.

"The single customer can assign his grocer to the task of obtaining whatever the customer can induce the grocer to provide at a price acceptable to both parties. To speak of managing, directing or assigning workers to various tasks is a deceptive way of noting that the employer continually is involved in renegotiation of contracts on terms that must be acceptable to both parties. Telling an employee to type this letter rather than to file that document is like my telling a grocer to sell me this brand of tuna rather than that brand of bread" (p.777)

There appears to be an implicit assumption on the part of Alchian and Demsetz that any costs associated with employee turnover are negligible and hence employers can adapt to changes in conditions of filling jobs on a spot market basis. As Williamson points out (1975) this is unlikely to be the case if there are idiosyncratic skills associated with the job, in which case an incumbent worker will have a first mover advantage. Workers can exploit this advantage when contracts are due

for renegotiation. The outcome will depend on the strength of the skills and bargaining power of the worker and the extent of the information about the supply of alternative labour inputs on the part of the employer. Either way costs will be incurred. If the employee is able to price him/herself above what would be a market clearing rate then there are direct additional labour costs incurred. If on the other hand a lower wage settlement is reached it might be because significant costs have been incurred through the absorption of real resources and delays in efficient adaption through bargaining.

Williamson (1980) claims that the authority relation creates flexibility though. This is because employees stand ready to accept authority regarding work assignments for example, provided that the behaviour called for falls within the "zone of acceptance" of the contract. This seems to ignore the transactions costs involved in establishing such a contract which Williamson constantly criticises others for ignoring. Moreover, if this is an advantage, there seems to be no reason why members of the LM – organisation should not be willing to accept assignments from a manager which fall within a pre – negotiated "zone of acceptance". That zone of acceptance is likely to have been defined by members democratically anyway.

The idea that renegotiation will take place at regular intervals is peculiar only to the PM-firm. In the LM-firm there is an initial contract agreeing that any surplus will be distributed, according to some rule, between the workforce. No explicit bargaining or subsequent renegotiation takes place outside of the democratic, decision-making forum. Although common in the cooperative organisation is the use of a probationary period for new members, where people can enter the cooperative (or leave subsequently) at very little cost to the enterprise.

The situation becomes even more significant when we consider that many PM employers will be negotiating not with individuals but with trade unions. The ability of employees to organise themselves collectively can result in contract prices being higher than would otherwise be the case; increasing direct costs still further. Williamson (1980) himself argues that if a few agents are responsible for all the contracting this actually increases the degree of hierarchy. Moreover the actual bargaining process itself may be significantly more expensive unless the employer is willing to grant 'across-the-board' settlements.

It may be the case of course that the employer will have a degree of monopsony power accruing from the costs of search on the part of labour supplies. Cable and Fitzroy (1980) conclude from this however that the traditional PM-firm will become a bargaining arena, full of

conflict and mistrust.

### 3.2.6 Contributions to a Theory of Cooperation?

Williamson's analysis and arguments do clarify intuitive thinking about efficiency and organisational form even if much of the detail is open to debate. Much of his discussion about the peer group seems to situate this organisational form in a large institutional framework. But the real contribution must be to see that form within the smaller enterprise, common in the U.K., where Williamson (1980) himself sees certain advantages.

The problem with Williamson's analysis is that he sees any degree of hierarchy within an organisation to be a movement away from the collective, peer group enterprise and the beginning of the capitalist structure of production. There is a need to consider partially democratic organisational forms, especially where this is representative of the democratic cooperative enterprise which employs management skills to make day – to – day decisions.

That management skills are a necessity in some organisations is hardly to be disputed. But Williamson's inference that hierarchy is a superior form in general, to such an extent that workers themselves have an

incentive to adopt it, seems irrational. If workers are to some extent tied in to firms and if managers through superior information can obtain strategic advantages over everyone else, then why should workers want to relinquish their control over production or, indeed, their ultimate control over managers themselves?

Williamson's attempt to argue that the capitalist form of organisation of production is superior to the workers' control form seems deficient. But as Putterman (1984) points out "his positive contribution to the understanding of the firm is significant ...[and] among its greatest virtues is its detection of the utility of cooperative strategies in a world in which the material and psychological costs of individualism are high" (p.179). In addition, Williamson's framework with its emphasis upon human – relations elements and its economics grounded in a world of bounded rationality and imperfect information seems particularly valid when examining the cooperative sector.

### 3.3 Beyond Williamson ?

Marglin (1974) argues that the non-experimental nature of the social sciences contributes to the continuing neglect of internal organisation. Were this not the case, alternative modes of organisation, including egalitarian work modes, would be designed and tested experimentally. This section looks at a number of (as yet relatively unresearched) reasons why we might expect costs in the LM-firm to be lower than those of the PM-firm. If that is the case then *ceteris paribus* the LM-firm will have better efficiency attributes.

#### 3.3.1 The Disutility of Work

Blumberg (1976) argues that there is scarcely a study in the literature which fails to demonstrate that satisfaction is enhanced or productivity increased from a genuine increase in workers' decision-making power. Bowles and Gintis (1976) argue that the participative worker is an involved worker. Gallagher and Einhorn (1976) conclude their survey of the literature with the observation that job enlargement and job enrichment can be useful tools for management. But they note that a question mark remains under what conditions participation will be most effective.

The history of capitalist hierarchies tends to support the view that non-hierarchical modes of organisation are in fact more efficient because of the disutility of work created by the capitalist mode. Stone (1974), Bowles and Gintis (1976), Braverman (1974) and Marx (1967) all give examples of this claim. Thus a movement towards a peer group organisation can result in increased work utility and better productivity. Much of this debate is related to issues associated with atmosphere already discussed above.

### 3.3.2 Remuneration to Workers

There are two reasons why we might expect (at least in the short run) remuneration paid to the members of the LM-firm to be less than the remuneration paid to workers in the PM-firm.

Firstly, at times, of unemployment we can expect the number of workers searching for jobs and starting new enterprises to be high. These workers will accept wages less than those paid to workers who are already employed, although greater than social security and unemployment benefits. Bollard (1983) has shown that there is a rapid rise in small businesses associated with rising unemployment.

Research by Welford (1988) shows that a significant number of cooperatives started from a redundancy situation or as an attempt to create work and Jefferis (1988) has shown that the growth of the cooperative sector is highest at times of unemployment.

Secondly, and as Williamson (1980) himself notes, workers who are attracted to LM-firms will work for a lesser wage because the oppressiveness of the authority relation is removed and utility from work increased. Just as workers will accept a trade-off between income and leisure so we can expect a similar relationship between income and job satisfaction.

### 3.3.3 The share of residuals

In the long run where the degree of labour mobility and market information is significant and where trade unions bargain with respect to relativities and differentials we may expect wages paid in the PM-firm to be equal to the average surplus received by the member of the LM-firm.

If the PM-firm has shareholders then they will expect a level of profit to provide them with a dividend which must be at least the value that will keep them investing in the company or provide for capital growth



equal to the mean level for similar firms. This must enter the cost function as a normal cost. In other words PM-firm has extra additional costs being levied on it by virtue of the need to support capitalist non-wage earners. Initial capital in the LM-firm will often result from the members and the returns to that are included in their surplus.

It might be countered that PM-wages will not equal LM-average surpluses after all, but will be equal to average LM-surpluses minus the return on initial capital invested. That relies on significant information being available but we do not dispute the case here.

However, Jensen and Meckling (1976) suggest that where owners of a firm also control it, they will be willing to accept a lower rate of return on capital than the owners of a firm who do not have control. Hence we would still argue that the normal profit element of the cost function for the PM-firm results in higher costs. This analysis is based on a degree of managerial discretion being exerted in the PM-firm which they argue might be *eliminated by use of incentive schemes* such as profit-sharing.

### 3.3.4 The External Environment

The environment in which the LM – firm is likely to operate is unlikely to be perfectly competitive. The U.K. economy can be characterised as oligopolistic where large dominant PM – firms have significant market power. According to Jefferis (1988) LM – firms are commonly part of a fringe of small firms operating in these markets. Commonly, this fringe is surviving because of new flexible technology, more specialised products and markets and changing employment practices. According to many commentators (e.g. Wood, 1989, Piore and Sabel, 1984) we are now living in a post – Fordist era of flexible specialisation in industrial production which is likely to enhance the likelihood of survival of small firms.

We have presented some evidence to suggest the LM – firms will have a cost advantage over PM – firms (of a similar size) because of their flexibility amongst other reasons. But we have not considered the possibility that PM – firms will on average be larger. The issue here must therefore centre around the extent of scale economies. The literature on scale economies comes to no real conclusion about the extent of these scale economies or the extent to which the benefits of large scale production are fully mirrored in the cost functions of large

firms. Interest here surrounds the issue as to whether scale economies can outweigh other potential cost advantages of LM – firms.

Bannock (1981) argues that technological as well as social change now strongly favours small firms and that high energy prices favour decentralised production to avoid rising transport costs. Bannock gives the example of localised bakeries and breweries re – emerging to serve small communities, implying diseconomies of large scale production. Gold (1981) argues that the widespread faith in the economies of scale argument has not gained much support from theoretical and empirical literature. Analyses have repeatedly called attention to the fuzziness of the basic concept of scale and to uncertainties about the sources of expected benefits, as well as the relatively modest gains apparently derived from additional increases in scale. Bollard (1983) finds that for technological and economic reasons economies of scale are no longer increasing and that small firms' prospects are now more favourable. Environmental pressures and changing markets are likely to provide many economies of small scale production. Altshuler et. al. (1984) show that, although the motor industry has often been used to illustrate the economies and advantages of large scale production, economies of scale are receding.

Thus there is clearly no definitive answer to the question as to whether small LM – firms will have a cost advantage over larger PM – firms. Scale economies might exist but they often appear to be overstated in theory. Empirical investigations using matched data may give us some answers to the questions posed here and clearly further research is necessary.

### 3.4 Empirical Studies

In reality there will be a range of different organisational forms rather than an LM – firm peer group structure and a PM – firm authoritarian structure. Thus we are interested in ascertaining whether or not variations in decision – making, participation and ownership affect the performance of firms. In examining this area we should recognise the methodological links between the studies in terms of the participation – augmented production function.

Defourney, Estrin and Jones (1985) examined a total of 960 firms in 1978 and 1979 in the French economy which has one of the largest LM sectors in capitalist economies. Participation in the firm was proxied by the proportion of workers who were members. It was found that five organisational variables had a significant positive impact on

performance.

Jones (1982) conducted a similar analysis of British producer cooperatives over the period 1948 – 68. In all 78 enterprises were examined. Three alternative proxies for worker participation were assessed: the proportion of the board of management that were worker – members, the proportion of workers who were members, and the proportion of members that were workers. Another two organisational variables were included; the total share capital owned by workers and the total profits distributed to workers. In two of the three industries examined (footwear and printing) Jones makes the tentative suggestion that worker participation does lead to improved performance. In the third industry (clothing) the coefficients relating to participation were insignificant. However, in all three industries examined positive coefficients relating to incentive effects of surplus sharing were obtained.

Estrin, Jones and Svejnar (1987) estimate production functions using data on French, British and Italian producer cooperatives. The authors find that in France and Italy higher levels of participation are most likely to enhance performance. Less clear results are available for the U.K. The authors explain this to some extent by their claim that the external environment is important and that in Italy and France there is a strong

cooperative tradition, well organised supporting institutions and an average general high degree of participation.

Cable and Fitzroy (1980) in a sample of 42 West German enterprises asked managers in each firm to provide a subjective assessment of the degree of worker involvement choosing between "no participation", "observers", "advisors" or "active participants", in various areas of decision – making. This information was used to construct an index of participation. Two further variables were examined: workers' capital stakes and profits distributed to workers. Pooled cross section and annual data, 1974 – 1976 were used. The OLS estimates suggest that participation has a positive impact on performance and that capital ownership by workers improved performance when combined with high levels of participation. The results also showed that only when participation was high was there a significant positive coefficient on profits distributed to workers. This has an interesting implication for firms currently engaged in profit sharing schemes.

Espinosa and Zimbalist (1978) examined worker participation in Chilean state – owned enterprises. During the period 1970 – 1973, 35 industrial enterprises were examined in considerable depth. To construct the participation index enterprises were awarded points according to: the functioning of the formal structure of participation, the topics or areas

discussed and the effective influence exercised by workers or their representatives. A regression of productivity, measured by the average annual change in output per worker, on participation, employment and investment yields a significant positive coefficient on participation.

Thus the studies cited would tend to suggest that a participatory organisational form will lead to better productivity and consequently lower costs. Moreover it seems from the study by Cable and Fitzroy (1980) that when direct worker participation and financial participation are combined the benefits are greatest. This conclusion is also reached in the study by Jones (1982) and the implication is that as we move along the spectrum of organisational forms from the traditional capitalist to the labour-managed the benefits increase. All these studies fail to take account of what Levin (1982) terms non-market outputs (e.g. improved atmosphere at work) and we might hypothesise that this would add to perceived benefits.

### 3.5 Empirical Results from the Survey of Producer Cooperatives

The issues associated with efficiency differences between LM – and PM – production raised above have been investigated by examining the organisation, attitudes and operational behaviour of our sample of cooperatives producing in the U.K. Part of the aim of the second questionnaire was to examine the order of the Williamson rankings, and implicit assumptions therein, and to investigate claims made about cooperative production made by Alchian and Demsetz (1982), Williamson (1975), 1980), Jensen and Meckling (1976) and others.

Central to the Alchian and Demsetz view is the contention that there is a greater incentive for members to shirk in a LM – organisation compared with a PM – organisation. But many of the cooperatives surveyed implied a reverse situation. For example, 37 out of 78 cooperatives definitely thought there were productivity advantages associated with cooperative organisation. Eight of these stated clearly that the reason for that was the self – monitoring properties of joint decision – making leading to no shirking. One cooperative for example stated:

"We do not have strikes, no shirking and lots of variety in regard to work."



On the other hand, of 13 firms who considered there to be definite productivity disadvantages associated with being a cooperative, three said that the reason was that work effort was not expected to be so intense.

One property of self-monitoring, particularly when it is tied into cooperative ownership, which Alchian and Demsetz do not discuss, is related to the issue of the use of materials and wastage. There is an in-built incentive, when workers themselves are residual claimants, for the amount of waste to be reduced. One co-operative stated clearly:

"If you give people an actual part  
share of a firm waste in all its  
forms almost disappears."

Perhaps the main weakness in the Alchian and Demsetz argument is the implicit assumption that LM-organisations would lack general monitoring properties. Cooperatives in the survey, most of which acknowledge the need for monitoring, fall into two camps here. Firstly, there are those who see themselves as being self-monitoring, and secondly, those (42 out of 78) who have somebody or a group of people acting in a managerial capacity. This tendency seems to

support the view of Putterman (1984) in arguing that if there are benefits in appointing a specialist monitor in the PM-firm then the same is likely to occur in the LM-firm.

Williamson's (1980) contribution to the debate is to examine stylised forms of PM- and LM-organisation in order to derive efficiency rankings based on binary scores. Examination of his five incentive attributes does give some indication that his peer group organisation has advantages. In the second survey of 46 cooperatives, each was asked whether they considered these same attributes to be superior, identical or inferior in a cooperative firm when compared with a traditional firm. Even allowing for obvious bias by some cooperatives committed to the movement the results are pretty decisive:

	<u>Superior</u>	<u>Identical</u>	<u>Inferior</u>	<u>Don't Know</u>
Work intensity	28	18	0	0
Care in equipment utilisation	24	16	6	0
Local shock responsiveness	30	14	1	1
Local innovation	38	4	3	1
System responsiveness	22	18	4	2

Table 3.3

It should be mentioned that respondents were not questioned about these terms directly (or those in the table which follows) but about more understandable descriptions of Williamson's terminology. (This can be seen from the copy of the questionnaire used and contained in the appendix.) Williamson's assessment that there will be peer group advantages with respect to local innovations is most clearly confirmed. But his assertion that there will be no difference between the two organisations with respect to poor work intensity is clearly now in question.

Moreover if we look at the responses of the full sample of 78 cooperatives to the question relating to productivity advantages, only three (already cited) thought that work effort would be less in the cooperative enterprise, whereas 36 cooperatives thought that advantages would come about via increased motivation, flexibility and commitment.

In the three cases (care in equipment utilisation, local shock responsiveness and system responsiveness) where Williamson sees positive attributes for both types of organisation, we find that the cooperatives themselves consider there to be advantages over and above their capitalist counterparts. This implies a major weakness for

Williamson's binary ranking.

On the subject of assignment, Williamson cites three types which organisations must take: station assignments; leadership and contracting. He claims that his authority relation is superior based on a crucial assumption, namely, that in a peer group leadership must be rotated among all the membership. When questioned, the 46 cooperatives in the survey responded to the assignment categories in a rather more mixed way:

	<u>Superior</u>	<u>Identical</u>	<u>Inferior</u>	<u>Don't Know</u>
Station assignments	18	22	5	1
Leadership	18	14	14	0
Contracting	5	34	3	4

Table 3.4

Allowing for implicit bias already mentioned, we would have to conclude that there seems no significant advantage associated with cooperative production with respect to station assignments. Although Williamson implies advantages for the authority relation.

Examination of how work is assigned amongst members of the 78 cooperatives in the original survey yields the following results:

<u>Allocation device</u>	<u>Number of cooperatives citing this as a method of job allocation</u>
Work is divided on specific skill lines	47
Certain jobs have always been done by the same people	15
Work is rotated	9
There is no specific division of labour	21
Allocation is done by management	10

Note: The figures do not add up to 78 because some cooperatives specified more than one allocation device.

Table 3.5

Commonly in larger more automated cooperatives work was done on skill lines, whereas with the smallest cooperatives there was usually no specific division of labour.

Nevertheless, a common theme amongst all cooperatives was the recognition of the need for flexibility and the advantages associated with a lack of demarcation. The fact that members were expected to do any job which needed doing in the organisation was commonly stated. One cooperative wrote:

"We all have specific jobs to do but at busy times we all muck in to get things finished – if the van needs loading whoever is available does it. We all work until the work is finished – together!"

and another:

"There is no longer a them and us attitude. Everyone works for the same goal."

On the other hand a tendency to overwork was cited by one cooperative:

*"There are manifest disadvantages with regard to efficiency, e.g. the reluctance to take on new members until overwork is almost crushing."*

This theme will be common to those aware of the literature on supply – side constraints associated with LM – organisation, where it is argued that the LM – firm will forgo growth because of an unwillingness to expand the workforce (see for example Atkinson, 1973 and Bonin, 1983).

The issue of leadership, whilst seemingly balanced, requires rather more detailed attention. In 42 out of the 78 cooperatives in the original survey there existed a manager or management team (table 2.7). In eight of these cases it was not clear whether that management was a permanent fixture. Telephone calls to these cooperatives revealed that in two cases only, did management rotate. Thus Williamson's requirement that leadership is rotated in the peer group relation is hardly representative of the cooperative sector. There seems to be rather more acceptance amongst cooperatives who adopt a

management role, of the specialist attributes discussed by authors such as Putterman (1981).

Williamson argues that management can become an elite if not rotated. This ignores the fact that in most cases (27 out of 42) managers were elected. In only seven cases was it clear that management was not elected, although in five of these cases policy decisions were not taken by managers. In only two out of 42 cases do we find that there is some possibility that management might have become an elite, it being them who decided on policy matters.

If we re-examine the leadership attribute in terms of cooperatives with or without a management structure, a rather more interesting picture emerges: –

	<u>Superior</u>	<u>Identical</u>	<u>Inferior</u>	<u>Don't Know</u>
All cooperatives	18	14	14	0
Cooperatives with managers	16	8	4	0
Cooperatives without managers	2	6	10	0

Table 3.6



Clearly, the majority of those cooperatives who did adopt some sort of management role thought that there were advantages associated with the LM – organisation. Those without managerial leadership clearly thought that there existed inferior attributes. There may of course be some implicit bias here however, since it is likely that where a managerial structure did exist it was the cooperative manager who completed the questionnaire. In addition, implicitly, only those believing in cooperative production were asked for their views of the advantages of cooperative production. However, we may assume that the respondents did have experience of other than cooperative forms of organisation since the average age of most cooperatives was less than the average time worked of its members.

It may be the case that cooperatives preferring not to adopt any degree of management leadership may find some advantages of doing so. But even amongst the cooperatives who do not adopt a management role there may already be some recognition of the importance of this task. One such cooperative commented:

"Productivity is largely based on good management, does our type of organisation automatically provide this?"

Thus the assumption, implicitly made by many including Williamson, that LM – production and the adoption of a managerial structure are incompatible, seems over – simplistic. There is no real reason to dismiss some degree of managerialism in the cooperative firm. On the contrary the number of cooperatives doing just that (bounded by ultimate democratic control by members) and reporting associated benefits must at least suggest that a degree of hierarchy may be beneficial to cooperative development. Once we accept this, much of the Alchian and Demsetz debate discussed in section 2 is significantly reduced in importance.

With respect to contracting, clearly no perceivable differences existed in the eyes of cooperative enterprises when compared to profit – maximising ones.

Atmosphere at work is commonly cited (e.g. Williamson, 1975) as a possible source of productivity advantages. It is an area cited by many cooperatives as being particularly important. Out of 78 cooperatives, 35 saw a good atmosphere as a very important objective in the establishment of the cooperative and a further 27 saw it as important. Seven cooperatives clearly specified one of its aims as the provision of good working conditions.

Clearly, Williamson's notion that work satisfaction is something to be set against organisational efficiency rather than as an element contributing to it is now questionable. In the eyes of many cooperative firms a good atmosphere not only adds to the basic utility associated with work but also helps to create an environment contributing positively to productivity and efficiency. This seems to confirm the research of authors such as Blumberg (1968).

On the subject of bargaining costs, clearly negotiation of wage rates and/or bonus payments is normally carried out in a democratic decision-making meeting. This may cut down the need to negotiate and renegotiate with individuals which is a cost to be borne by the PM-organisation. Perhaps at times of heavy demand, when overtime is required, these bargaining costs become highest for the capitalist firm. For the labour-managed firm there is evidence to suggest that these costs can be avoided. Eleven cooperatives who thought there were productivity advantages associated with LM-production did so because of their perception that their organisations were flexible with respect to honours worked. One cooperative, which thought that this was the only advantage, stated:

"The only possible gains are in

members' willingness to work  
whatever hours necessary, often  
for no additional reward."

However, the positive attributes associated with LM – organisation should not be allowed to hide the negative ones identified by a number of cooperatives in different ways. Essentially, the linking theme amongst cooperatives who consider there to be some productivity disadvantages associated with LM – production revolves around a trade – off between efficiency and the democratic decision – making process. One cooperative put this succinctly as:

"Commitment and flexibility has to  
be set against operating costs of  
workplace democracy."

Implicit in this is the acceptance of potential productivity advantages being sacrificed in favour of the maintenance of collective decision – making. Another cooperative stated:

"Collective decision – making is less  
efficient .... but on the other hand  
cooperative members exploit themselves

more thus making each worker more  
productive."

In particular, it is the slowness of the decision – making process which many cooperatives saw as a hinderance. But once again the issue of the degree of management arises. All but one of those cooperatives complaining about decision – making lags were completely democratic insofar as even day – to – day decisions were being made by all members. In one case where the cooperative comprised nine members (some of which were part – time), it is hardly surprising that there are considerable costs associated with workplace democracy.

The fact that some cooperatives see themselves as less efficient than their capitalist counterparts is not necessarily seen as a bad thing *per se*. In particular this is often the result of deliberate and rational trade – offs associated with increased job satisfaction, work effort and flexible working hours. The latter is seen as very important by many women members with children.

Typically, cooperatives stated views such as:

"Productivity in the main suffers  
slightly in favour of increased

job satisfaction."

and:

"We do not want to feel that we have  
to work at full capacity all the time.

We give ourselves more time off which  
reduces our productivity."

Moving beyond the framework provided by Alchian and Demsetz and Williamson, the key areas left to discuss are the disutility associated with the capitalist mode of production (e.g. Blumberg, 1976 and Bowles and Gintis, 1976) and the issue of lower costs associated with lower remuneration to workers and shares of residuals.

A survey of cooperative firms can only hope to find anecdotal evidence to support or question the first contention. Nevertheless, many cooperatives did compare themselves to their capitalist counterparts when discussing issues surrounding productivity and relative efficiency, citing benefits accruing from lack of demarcation, members receiving the benefits of their own labour and (again) a better atmosphere at work.

Rather more can be said about the second issue. Examining relative wages, out of 67 cooperatives expressing an opinion, 27 (41%) thought that wages were lower in the cooperative compared to the non-cooperative sector, 25 (37%) thought they were about the same and 15 (22%) thought they were higher.

One cooperative stated:

"We are only productive because we  
tend to exploit ourselves."

The subject of self-exploitation stems, in theoretical terms, from the analysis of the cooperative sector provided by Webb and Webb (1914). Some cooperatives seem to see themselves as being self-exploitative in terms of hours worked and wages paid. This is not a clear cut issue though. Whilst some cooperative members see themselves as earning less than they might do elsewhere for possibly less money, they often fail to take into account other benefits of working in a self-managed environment. These include the utility derived from good atmosphere at work and flexible working, noted particularly by mothers needing to organise work around childcare. Other non-financial benefits include: the desire for a high quality of workmanship and creativity; working with and responsibility towards the community;

training and skills development; equal status for women and minority groups and non – exploitation. This issue is further examined in chapter 7.

### 3.6 Concluding Remarks

Various sources of efficiency differences between profit – maximising and labour – managed firms have been examined both theoretically and empirically. Whilst the work of Williamson (1975, 1976, 1980) suggests that the two organisational forms examined will have different rankings and that no predictions can be made about efficiency, it is argued here that this is based on restrictive assumptions. Re – examination of the situation without these assumptions leads us to believe that LM – firms may indeed have efficiency advantages.

Nevertheless, the work of Williamson provides us with a basic framework of analysis upon which it is possible to build a picture of the cooperative firm in the U.K. Taking his peer group relation and adapting it to observations from a sample of worker cooperatives, it has been possible to challenge theoretically and empirically many of the claims made by Williamson (1980) and Alchian and Demsetz (1972) relating to the relative inefficiency of labour – managed production.



Examination of previous empirical analysis does not resolve the debate but it adds some weight to the general picture that productivity may be enhanced by worker participation and ownership, especially when they are combined.

In the past the benefits associated with self-monitoring and self-assignment of workers to tasks have been understated. There are many reasons to believe that workers can and do make constructive contributions to the efficiency of the firm in these areas. Participation in the running of the firm allied with ownership of it seems to have significant advantages.

Nevertheless, there still exist good reasons for the adoption of a degree of hierarchy when bounded by "zones of acceptance". Williamson's notion that any degree of hierarchy is a move towards PM-production and away from LM-production is too simplistic. Indeed, it can be seen that there are many circumstances where the cooperative firm can benefit from the adoption of a degree of hierarchy, by the use of managerial skills. We return to this issue again later in the thesis. Cooperatives in the survey who did this reported benefits over and above others who did not. Management, ultimately, still has to be accountable to the democratic structure of the cooperative

enterprise, but there seems little doubt that there are efficiency advantages associated with day-to-day management roles. It may be in the interests of many cooperatives to develop such a skill.

Overall, we must dispute the claims that the LM-firm is likely to be less efficient compared with its capitalist counterpart. Indeed, many reasons have been cited to suggest the opposite. These reasons are related to the workplace environment, ownership and workplace relationships and the adoption of a management structure.

Given the surprising importance of management but the still significantly different internal characteristics of the cooperative enterprise discussed in this chapter, we might now be interested in investigating what cooperatives actually plan to do. In other words, what is their planned behaviour and general objectives. Essentially it is to these issues which we turn in chapters 4 and 5.

## **CHAPTER 4**

# **ALTERNATIVE MAXIMANDS AND THE COOPERATIVE OBJECTIVE FUNCTION**

### 4.1 Introduction

In the analysis of the traditional capitalist firm the dominant assumption has generally been the maximisation of profits. Of interest in itself is the challenge to this assumption provided by other objective formulations such as sales maximisation, growth maximisation and managerial utility maximisation. A behavioural approach to the capitalist firm can lead us to view it as a satisficing coalition rather than an entity which maximises anything. In the case of worker cooperatives

we have seen that two key characteristics may lead us to challenge the assumption of profit maximisation even more. Firstly, many cooperatives in the U.K. have been established for political and ideological reasons often as a rebuttal to capitalist values and therefore the exclusive aim of profit maximisation may be seen as undesirable. Secondly we know that the size of U.K. cooperatives is small and we are left with the question as to whether small firms, however organised, do or are able to maximise profits.

The fundamental result that the demand for labour in a labour-managed firm is inversely related to output price is in part a result of the objective function chosen for the firm by Ward (1958). But one might usefully question the Ward Illyrian objective of dividend maximisation for most cooperative organisations as does Joan Robinson (1967) when she asks how, when profitability increases due to a change in a financial parameter, do the members choose whom among them will be dismissed so that the remaining members can enjoy a higher remuneration? Indeed there has been a dearth of empirical evidence to support ideas of perverse responses. Varian (1969) himself argues that it is nonsense to think that a working cooperative would mutilate itself for the sake of a small additional increase in income per worker.

The question then relates to whether we should abandon the dividend – maximising model altogether. Vanek argues that no labour – managed firm is a dividend maximiser but that its tendencies are in that direction. For example, improved profitability could lead to the non – replacement of retiring workers. Much of the economic literature over the last two decades builds on the Ward – Vanek tradition. No one is denying though that simplistic assumptions of profit maximisation or dividend maximisation can never fully capture the organisation and behaviour of firms, nevertheless according to writers such as Bonin and Putterman (1987) these simple models are the starting point for understanding the complex issues of real – world organisations and they have important implications for the economics of cooperation and self – management. It is thus with modifications to these theoretical models, which aim to build – in ‘realistic’ assumptions about the labour – managed firm, that we begin our analysis in section 4.2. In so doing we establish a theoretical framework from which questions of the data can be asked.

Section 4.3 broadens the debate about objectives and motivations of the cooperative movement with an examination of a socio – economic perspective. Although this necessarily encompasses a whole spectrum of analysis an attempt is made to deduce something about the objective function of the typical cooperative enterprise. The following section questions the theory and discussion of the previous two with

an effort to add some empirical evidence to the analysis. Here an attempt is made to bring together the two seemingly divergent approaches of neo – classical analysis and discursive material. Finally, some concluding remarks are made in section 4.5.

#### 4.2 Theoretical Underpinnings

The traditional Ward – Vanek model of the LM – firm has been criticised by a number of authors on the basis of its limited objective function. Various attempts have been made at making this model more realistic. For example, the objective function may be made more realistic by including the size of membership as well as the workers' utility function (see for example, Law 1977, Berman 1977 and Estrin 1979). In addition it has been argued that membership is not likely to be a short run variable with changes in output and therefore changes in labour input being accommodated by a change in the number of hours worked by the members (Berman, 1977) or by a change in the intensity of work done by members.

Some authors have also argued that the effort expended by members is likely to be higher than that expended by workers under capitalism (Tyson 1979, Ireland 1981). This may be due to reduced alienation (Reich and Devine, 1981) or a sense of loyalty or perhaps a result of

the knowledge that the enterprise surplus will return to labour. This type of consideration implies that LM – firms may be more productive and have lower per unit costs than comparable PM – firms. This was discussed in chapter 3 and is ignored for the time being.

Assuming that the utility function of the members is to include income (y) and membership (L) the behaviour of the firm can be expressed as:

$$\max. U = u(y, L) \quad (1)$$

Where U is the utility function of the firm. Differentiating with respect to L gives us the first order condition for maximisation with respect to membership.

$$\delta U / \delta y \cdot \delta y / \delta L + \delta U / \delta L = 0 \quad (2)$$

Therefore:

$$\delta y / \delta L = - (\delta U / \delta L) / (\delta U / \delta y) \quad (3)$$

Equation (3) can be interpreted as saying that the slope of the income – indifference curve should equal the change in income resulting from a change in membership. If we assume an egalitarian distribution of income then (3) can be rewritten as:

$$\delta y / \delta L = (p \cdot \delta X / \delta L - y) / L \quad (4)$$

Thus the change in income resulting from a change in membership will be equal to each members' share of the difference between the value of the marginal product of membership and the dividend. So long as workers have some preference regarding changes in membership (i.e.  $\delta U / \delta L < > 0$ ) then the utility maximising labour force is attained where

$$p \cdot \delta X / \delta L < > y \quad (5)$$

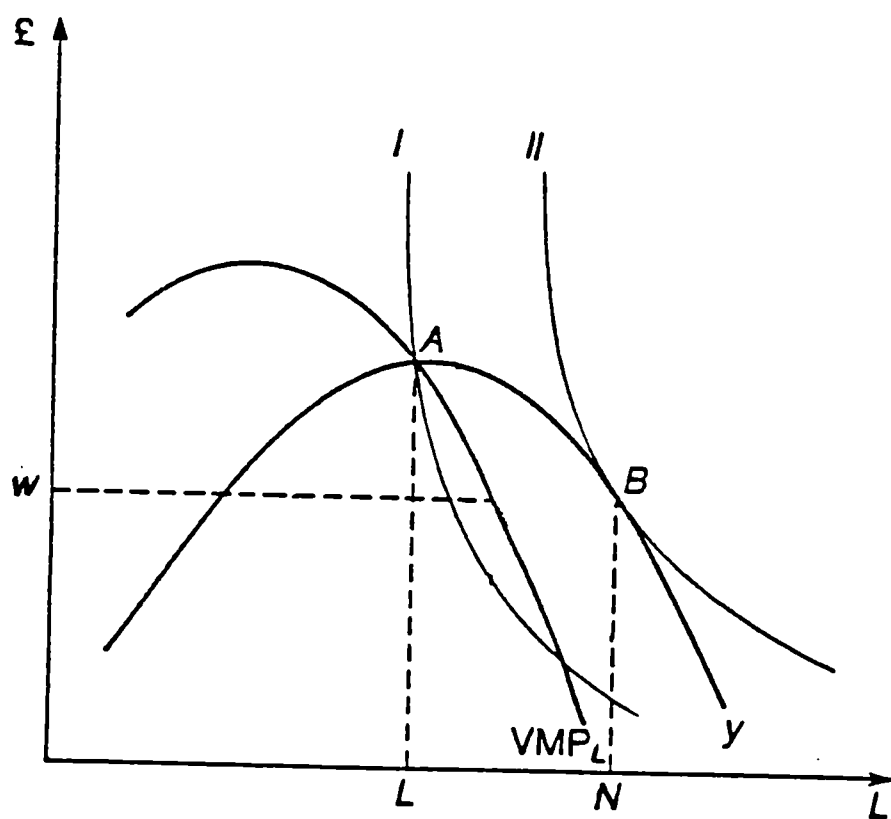
and thus the dividend is not at a maximum. In other words there will be a trade off between dividend and employment. We can illustrate this by superimposing an indifference map on the dividend curve and the VMP curve (Figure 4.1)<sup>1</sup>.

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<sup>1</sup> The diagrams in this section are adapted from Stephen (1983).



Figure 4.1



The traditional Ward – Vanek firm would be in equilibrium at point A with membership L, whereas the utility maximising firm is in equilibrium at point B where the dividend curve is tangential to the indifference curve, with a membership of N. The indifference curves are drawn assuming that workers have a positive preference for both income and the size of membership with the consequence that *ceteris paribus* the LM – firm will increase in size.

Any change in prices will lead to a response from the firm which in turn will depend on the shape of the indifference curves, or more correctly the relative weights on dividend and employment in the utility function. An increase in output price will shift y upwards. The response in terms of membership will depend on the nature of the utility function therefore. Law (1977) shows that given a plausible utility function the response could reverse the traditional 'perverse' supply response. On the other hand Estrin (1979) argues that a realistic preference function for the firm will involve discontinuities around what are limits to feasible adjustments in membership for internal 'political' reasons. It is argued that the firm will not increase employment in response to an increase in output price.

Attempts to broaden the objective function of the LM – firm indicate that the perverse supply response can at least be mitigated. Stephen (1983) rightly argues though, that the validity of all of these conclusions depends critically on the empirical verifiability of the utility function and therefore on the type of empirical observation facilitated in this thesis. Empirics are discussed in more detail below.

A key criticism of the basic model is that membership is likely not to be a short run variable at all. The traditional model would predict that workers should leave the LM – firm if the value marginal product of a member is less than existing income per member. The acceptability of this assumption has been questioned however (see, for example, Neuberger and James, 1973). It is perhaps an unacceptable assumption that workers will be expected to leave an LM – firm for temporary economic gain. Similarly, if firms will not be prepared to fire workers in the short run, then they will also be cautious in hiring them in the first place. This result is clearly apparent from the survey results presented in chapter 2 with many firms stressing the importance of equality and good atmosphere in the workplace and caution being taken over the acceptance of new members (usually after probationary periods). Indeed we should probably accept the view of Estrin (1981), who suggests that a likely consequence of self – management would actually be a reduction in employment flexibility.

Thus, as Berman (1977) notes, the size of membership in the LM-firm will be a long-run variable and consequently Estrin (1981) suggests that "a long-run perspective indicates that supply perversity might have limited empirical relevance" (p.373). Vanek himself acknowledges that membership may not be a short term variable (Vanek 1977). He says that membership reductions are more likely to take place slowly via natural wastage.

Accepting that the workforce will be fixed in the short run is not to claim that output or therefore labour input will also be fixed. Labour input may vary by the temporary employment of non-member employees as happens in the USA plywood cooperatives (Berman 1982). Ben-Ner (1984) and Miyazaki (1984) have pointed to the incentive to employ non-member labour, from an external market, as being a possible reason for the degeneration of the LMF into a capitalist mode. In the U.K. this sort of process is less likely since ICOM (Industrial Common Ownership Movement) model rules for the establishment of a cooperative do not permit non-member labour except in a probationary status. However, we return to the whole debate about degeneration in chapter 7.

Alternatively labour input can be adjusted by variations in worktime contributed by members. This is certainly a common attribute in the cooperatives surveyed, with many stating that long hours were worked when orders had to be met for example. In chapter 3 (section 3.5) we noted the cooperative which was reluctant to take on new workers until "overwork is almost crushing". Let us examine therefore how resource allocation will occur when workers have the freedom to determine their hours worked rather than the number of people employed.

Stephen (1983) outlines a model which may be articulated as the maximisation of the utility of the  $j$ th individual,  $U_j$ , subject to a dividend constraint, i.e.

$$\max. V = U(y_j, h_j) + z[y_j - (h_j/H)(p \cdot f(H,k) - rk)] \quad (7)$$

where  $y_j$  is the  $j$ th worker's dividend

$h_j$  is the hours worked by the  $j$ th individual

$H$  is total hours worked by all members

$p$  is the price of output

$X = f(H,k)$  is the production function

$k$  is the vector of non-labour inputs

$r$  is the vector of non-labour prices

$z$  is the Lagrange multiplier

It is assumed that there is no job opportunity which attracts the worker away from his firm and that each worker assumes that variations in his labour input do not affect the labour input of others.

The first order conditions for utility maximisation are given as:

$$\delta V_j / \delta y = \delta U_j + z = 0 \quad (8)$$

$$\begin{aligned} \delta V_j / \delta h = \delta U_j / \delta h - (z/H^2)[H(hp.\delta f / \delta H + pX - rk) - h_j(pX - rk)] \\ = 0 \end{aligned} \quad (9)$$

$$\delta V_j / \delta k_i = -z(h_j/H)[p.\delta f / \delta k_i - r_i] = 0 \quad (10)$$

where subscript  $i$  denotes the  $i$ th non-labour factor.

Equations (8) and (10) yield:

$$p.\delta f / \delta k_i = r_i \quad (11)$$

which, as in the basic model, suggests that each non-labour input should be used until its value of marginal product equals its price. The second condition, however, presents problems. Substituting for  $z$  and  $w = (pX - rk)/H$  yields:

$$-(\delta U_j / \delta h) / (\delta U_j / \delta y) = (h_j / H) p \cdot \delta f / \delta H + [1 - h_j / H] w. \quad (12)$$

The right hand side of (12) is the opportunity cost of work to the  $j$ th worker. With only one worker,  $(h_j / H) = 1$  and (12) reduces to:

$$-(\delta U_j / \delta h) / (\delta U_j / \delta y) = p \cdot \delta f / \delta H \quad (13)$$

i.e. the opportunity cost of labour is equal to its marginal value product.

However, where there is more than one worker (i.e.  $h_j < H$ ) the  $j$ th worker is encouraged to increase his/her hours worked beyond their optimum level from the point of view of the other members. This can be seen in figure 4.2.

The number of hours worked by those other than the  $j$ th worker is  $h$ . The curve  $Y$  shows the net income of the collective as a whole and the curve  $wh_j$  the income of the  $j$ th worker. The dividend per hour worked is shown by the slope of the ray from the origin to a point on  $Y$ . The income of the  $j$ th worker is given by the height of the  $wh_j$  curve, e.g. at  $H_1$  it is  $H_1 J$ . The line joining  $h$  to  $J$  will have a slope  $w$  since the  $j$ th worker works  $(H_1 - h)$  hours earning  $H_1 J$  income and thus the hourly rate is:

$$(H_j J)/(H_1 - h) = w \quad (14)$$

Thus  $hJ$  must be parallel to  $OF$ .

The slope of  $wh_j$  is the right hand side of equation (12).

Equation (12) therefore says that the  $j$ th worker will work until the slope of  $wh_j$  equals the slope of an income – hours indifference curve. Such a position is shown by point B in the diagram.

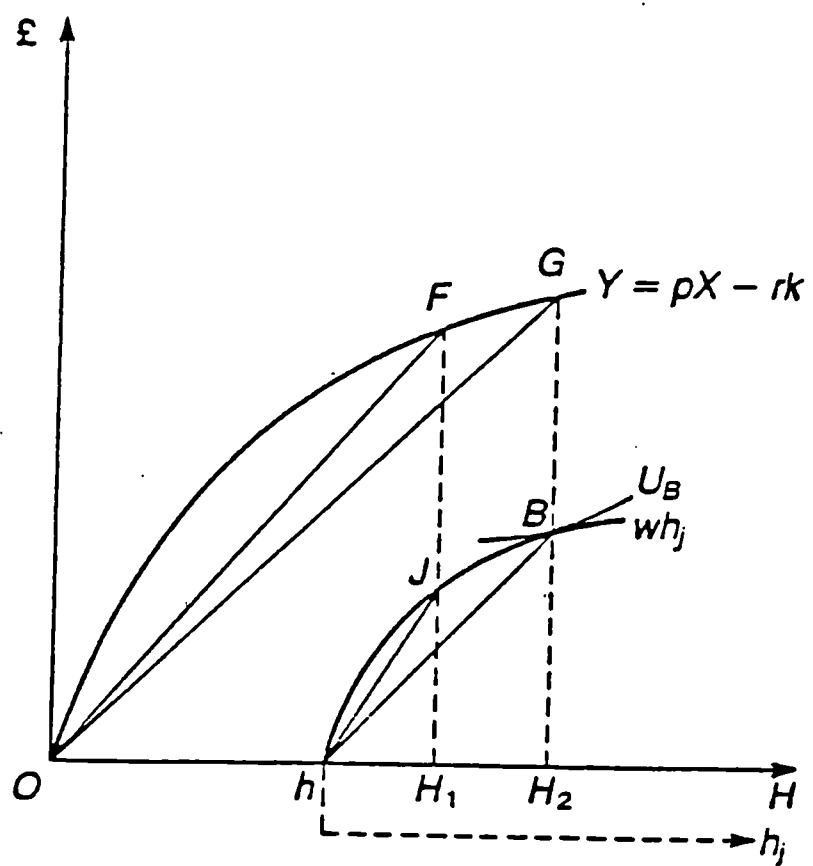
Berman (1977) notes that the slope of the indifference curve at B is less than the slope of the indifference curve at G, which is the marginal product of the last hour worked by the  $j$ th worker. As constructed with  $w > p \cdot \delta f / \delta H$  throughout the range of  $H$ , *ceteris paribus*, the other workers would prefer that the  $j$ th worker leaves the firm, since too many hours will be worked in total.

A solution to this conflict is that of collusion. A reasonable rule which may arise from collusion is that the  $j$ th worker may change the number of hours which he/she works when all other members of the collective change theirs by the same proportion, i.e.

$$d(h_j/H)/dh_j = 0 \quad (15)$$



Figure 4.2



The addition of this constraint to the optimisation problem yields the following first – order condition for utility maximisation by the  $j$ th worker, with respect to hours worked:

$$\delta V / \delta h = \delta U_j / \delta h - z(h_j / H)[p. \delta f / \delta H. (H / h_j)] \quad (16)$$

This yields:

$$p. \delta f / \delta H = - (\delta U_j / \delta h) / (\delta U_j / \delta y) \quad (17)$$

Berman and Berman (1978) suggest that a condition such as (17) will guarantee that a price increase will be met by an increase in hours worked, so long as the substitution effect outweighs the income effect. With a workforce of just four or five members which is common in the U.K. this 'collusion solution' is likely. Anecdotaly, one certainly gets the impression that equality in many cooperative enterprises extends to everyone doing equal amounts of overtime when necessary. Small size also makes it easier to select like – minded new members with similar preferences if flexible working becomes necessary.

So far it has been assumed that each member behaves in a way which maximises his/her own utility and is totally unaffected by the impact of his/her behaviour on others. This may not be the case. Cooperatives are often made up of people where we can assume that their preferences are like-minded. Indeed we know from chapter 2 that that is a common reason for the establishment of an enterprise in cooperative mode. Over time and given the stability which collective decision-making can create, the utility functions of individual members are likely to converge still further. Thus with identical utility functions the worker will no longer seek to maximise his/her own utility but the welfare of the whole membership or the "community" of which she/he is part. This may be thought of maximising:

$$W = U_j + \sum_{i=1}^N a_{ij} U_i \quad 0 \leq a_{ij} \leq 1 \quad \text{and } i=j \quad (18)$$

Following Sen (1966), the 'social consciousness' of individual  $j$  is defined as a measure of sympathy for others. This is constrained to be:

$$S_j = (\sum a_{ij})/N \quad (19)$$

It is further assumed that sympathy is symmetric, i.e.

$$S_j = S \quad \text{for all } j \quad (20)$$

Maximisation of  $W$  subject to the dividend constraint yields the following first order condition for the  $j$ th individual's choice of hours:

$$\begin{aligned} -(\delta U_j / \delta h) / (\delta U_j / \delta y) &= p \cdot \delta f / \delta H(h_j / H) + [1 - (h_j / H)]w \\ &+ \sum a_{ij} (\delta U_i / \delta y) / (\delta U_j / \delta y) [p \cdot \delta f / \delta H(h_i / H) \\ &- w(h_i / H)] \end{aligned} \quad (21)$$

Stephen (1983) shows that  $a_{ij} = (\delta U_j / \delta h) / (\delta U_j / \delta y)$  is the optimal degree of concern and is equivalent to the  $j$ th individual evaluating the income and effort positions of all individuals according to his/her own utility function. Thus the individual's utility function may be expressed as:

$$W_j = \sum U_j(y_i, h_i) \quad (22)$$

If all members have the same utility function and since all individuals offer the same amount of labour then Stephen (1983) shows that the optimality condition becomes:

$$- (\delta U / \delta h) / (\delta U / \delta y) = p \cdot \delta f / \delta H [S + (1 - S)B / \Omega] \quad (23)$$

where  $B$  is the ratio of income to total output and  $\Omega$  is the output elasticity of labour. Optimality requires that  $-(\delta U/\delta h)/(\delta U/\delta y) = p.\delta f/\delta h$  which means that either  $S=1$  or that  $B = \Omega$ .

Ireland and Law (1981) have shown that, except where  $S$  tends towards zero, the optimal hours for individual  $j$  may fall in response to an increase in product price even if the worker would have increased hours were he/she an employee offered a higher wage. Thus altruism does not necessarily rule out the possibility of a perverse supply response.

Ireland and Law (1981) show the comparative static responses of the firm for a specific form of utility function  $U = w - B(h)$ . The optimality condition (23) can be rewritten:

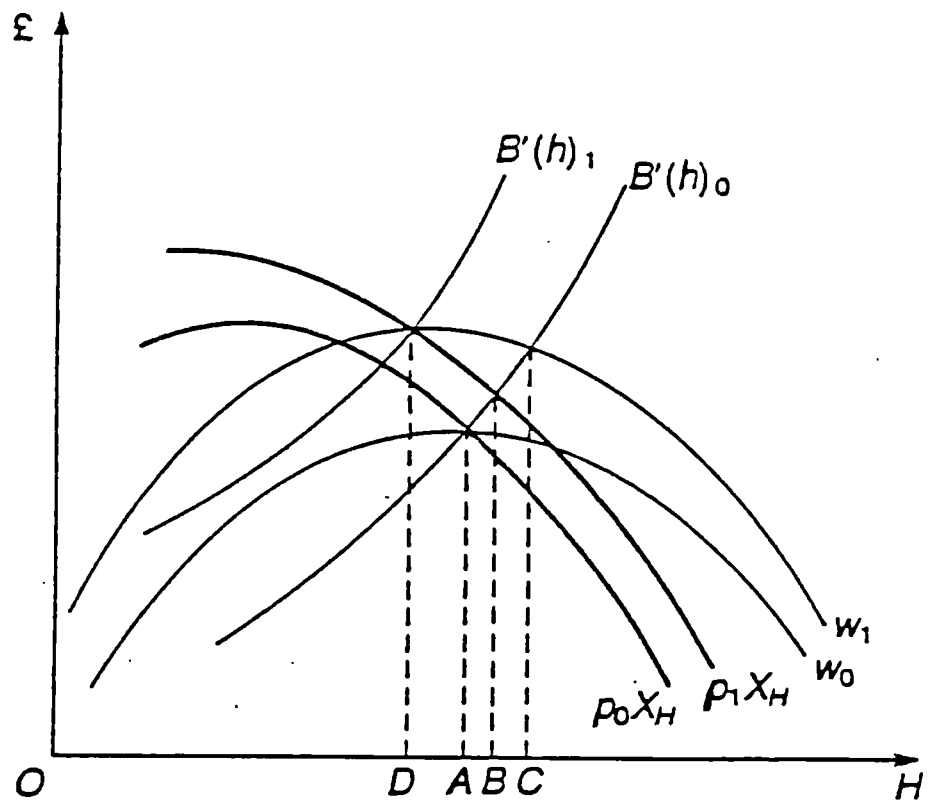
$$B'(h) = Sp(\delta f/\delta H) + (1 - S)(B/\Omega)p(\delta f/\delta H) \quad (24)$$

$$\text{or} \quad B'(h) = Sp(\delta f/\delta H) + (1 - S)w \quad (25)$$

Thus when  $S=1$ ,  $B'(h) = p.(\delta f/\delta h)$  and when  $S=0$ ,  $B'(h) = w$ .

Figure 4.3 assumes that membership is optimal and hours worked in equilibrium. The total hours worked will be  $OA$ .

Figure 4.3



When price increases from  $p_0$  to  $p_1$ , the value of marginal product curve increases to  $p_1X_H$  and the dividend curve shifts to  $w_1$ . Perfect sympathy would produce a short run solution of total hours of OB, whilst minimal sympathy yields OC. This confirms the argument that concern for others reduces labour input. This is because a greater number of hours per worker reduces  $w$ . In the longer run,  $B'(h)_0$  will shift to  $B'(h)_1$  and total hours is OD. Membership will have fallen but individual hours must rise since  $B'(h)$  is an increasing function of  $h$  and the marginal disutility of hours is greater at OD than at OA.

Vanek (1970) argues that where production cannot be imputed to each individual worker then a group behavioural approach is necessary. This relies on all income being imputable to the group and the democratic process engendering a group ethic. Thus Stephen (1983) extends the model by implying a group welfare function of the type:

$$U = U(y, L, H) \quad (26)$$

where  $y = (pX - rk)/n$

$H$  is the number of hours worked by the whole labour force

$L$  is the number of workers.

The optimisation problem becomes:

$$\max. \quad V = U(y, L, H) + z[y - (pX - rk)/L] \quad (27)$$

The first order conditions are then given by:

$$\delta V / \delta y = \delta U / \delta y + z = 0 \quad (28)$$

$$\text{Therefore} \quad \delta U / \delta y = -z \quad (29)$$

$$\delta V / \delta H = \delta U / \delta H - (zp.)\delta X / \delta H) / L = 0 \quad (30)$$

$$\text{Therefore} \quad -(\delta U / \delta H) / \delta U / \delta y = p.(\delta X / \delta h) / L \quad (31)$$

$$\delta V / \delta L = \delta U / \delta L - z[Lp(\delta X / \delta L) - (pX - rk)] / L^2 = 0 \quad (32)$$

$$\text{Therefore} \quad -(\delta U / \delta L)(\delta U / \delta y) = p(\delta X / \delta L) / L - y / L \quad (33)$$

$$\delta V / \delta k = -z(p(\delta X / \delta k) - r) / L = 0 \quad (34)$$

$$\text{Therefore} \quad p(\delta X / \delta k) = r \quad (35)$$



Equation (31) says that the slope of the cooperative's work – income indifference curve is equal to the income per worker curve and suggests that so long as the substitution effect outweighs the income effect an increase in  $p$  results in more hours being worked.

In the longer run the membership of the collective may also be varied. If the 'group' shows no preference as to size then (33) reduces to:

$$p(\delta X, \delta L) = y \quad (36)$$

i.e. the optimal condition in the basic model. The optimality condition for the non – labour factor (equation 35) is as before.

This model does beg a number of questions. For example, how is the group utility function derived and how are the  $H$  hours distributed amongst the  $L$  members? These questions will be interlinked to the extent that the shape of the utility function will be related to the factors determining the way in which the total hours are distributed, i.e. upon behavioural relationships. In order to answer these sorts of questions however, the internal organisation must be considered.

Clearly though the perverse short run supply response does depend on very simplistic assumptions being made. The basic Ward – Vanek model can be adapted in a number of ways in order to eliminate this response and this reflects much of the existing literature in this area.

Thus theoretical models of cooperative and participatory behaviour may or may not confirm the perverse supply relationship. We have shown how a basic formulation can be extended with further "realistic" assumptions but we still need to consider the extent to which these are appropriate as descriptions of the real world. It is not possible to comment empirically on the precise form of objective functions but it is possible to examine the sorts of motivations and behavioural patterns which will influence them. Thus we may infer something about the general nature of the objective function by observation. This is the aim of the remainder of this chapter.

#### 4.3 Objectives and motivations of the cooperative movement

We now turn our attention away from the neo – Classical framework to review literature related to our line of study from a socio – economic perspective. Previous literature adopting a socio – economic perspective examined the cooperative as an alternative social grouping where atmosphere, attitudes and relationships within the organisation are central. Discussion surrounding issues such as factors affecting the success of worker cooperatives (Cornforth, 1983), conditions for financial viability (Jefferis and Thomas, 1985) and performance (Jefferis and Thomas, 1987) has resulted in a greater empirical insight than had been previously provided.

A useful framework to begin with is provided by Mellor, Hannah and Stirling (1988), who make a brave attempt at defining the ideal cooperative. If dreams were to come true, they say (p. 173), the ideal worker cooperative would have the following characteristics:

1. Provide employment according to the desires of its members.
2. Employ no more people than can effectively participate in decision – making on an equal basis.

3. Provide socially useful products in a way that is not damaging to the environment.
4. Organise work in a way that is personally satisfying and rewarding.
5. Increase the political consciousness of cooperative members.
6. Operate in a way that is economically exploitative of neither its members or customers.
7. Adopt non – discriminatory employment practices and work practices.
8. Be part of a co – ordinated but decentralised communal economy or a movement working towards that end.

According to the authors these positive features largely reflect the sources of tension which have characterised cooperative development. They implicitly encompass a view of people as inherently uncompetitive and non – aggressive. If these aims are an accurate reflection of the desires of the cooperative movement in the U.K., then we should be able to deduce something about the *objective function of the individual* firm. To that end we need to examine some aspects of their list in greater detail.

#### 4.3.1 Socially useful production

An important aspect discussed within the cooperative movement is that of socially useful production. As early as 1844 the Rochdale Pioneers had made the production of pure and unadulterated food a fundamental principle. This has found considerable resurgence in the recent movement towards wholefood production. According to Collective Design Projects (1985) socially useful production simply reflects the idea

"that we should collectively produce those things that we need, rather than things that are frivolous, dangerous or even deadly." (p. 14)

The implication is that the emphasis lies less in exchange value and in what Mellor et al. (1988) call use value – in other words, production primarily for use rather than primarily for profit. But the key issue revolves around the question as to whether we can expect cooperatives to see socially useful production in a significantly different way to their capitalist counterparts. *Can we expect there to be anything in the particular organisation or structure of the cooperative which leads it to partake in socially useful production?* Freer (1983) notes that some

"... may hope for too much from workers' cooperatives as the making of profit is necessary for their survival. Yet they are probably realistic in believing the production of socially useful goods and services and the careful use of resources is more likely to be taken as a major aim among the highly committed members of a cooperative than in a conventional firm."

Taylor (1986) stresses the motivation of members of the cooperative when he notes:

"If the enterprise has been planned and developed by the workers themselves, they will have brought their everyday experience of the needs of society to this process. We believe that worker initiation of socially controlled enterprises is therefore a good way of re-directing the purpose of economic activity so that it meets social needs. Socially useful production is best determined by the members of society concerned, rather than *bureaucracies* working for them." (p. 15)

Bodington et. al. (1986) prefer to stress new types of consumerism as the driving force for change to socially worthwhile goods. The

implication being that, as Matthaei (1984) rightly points out, capitalists will find markets where it is profitable to produce some socially worthwhile goods. The response of commercial firms to the demand for additive free food and healthfoods and a sudden interest in "Green" marketing bears witness to this.

But socially useful production does not just focus on the product. It raises issues relating to methods of production and ecological considerations. Those who advocate socially useful production see a strong relationship between the product and the means by which it is produced. Collective Design Projects (1985) state:

"The debate about Socially Useful Production can encompass different stages of the production process: forms of ownership and control; work practices, labour processes, job satisfaction, challenge, involvement; useful products." (p. 14)

According to Mellor et. al. (1988) under these circumstances we might expect a cooperative to be the means by which the creation of socially useful production takes place. Production occurs in a democratic collective manner, although this is only to be achieved if work takes place in an economic and cultural environment which supports such

values.

From table 2.4 (page 33) we can see that the production of particular (socially useful) products is important. This is particularly the case with cooperatives engaged in the production of food and drink and in clothing, knitwear and footwear. A case study of a cooperative with the key objective of socially useful production is provided in chapter 8.

In all twenty – four cooperatives in the survey indicated that one of their main aims was to produce socially useful goods. Allied to this was (in about half the survey) a political consciousness. That political consciousness was not necessarily aimed primarily at the cooperative movement but did at least recognise issues such as worker democracy, self – determination and the notion of atmosphere at work being a function of the organisational form of that work. Thus when, as is common, an organisation is established as a rebuttal to capitalist values, producing a good which members consider to be socially important in a way which is not ecologically destructive, is it any wonder that modelling is difficult?



#### 4.3.2 Political consciousness

Irrespective of the political ideologies of members of the cooperative the fact remains that in the U.K. cooperatives are commercial enterprises operating in the capitalist market. The question which therefore follows is does the cooperative tend to exhibit particular political motivations in its behaviour? And if it does exhibit such motivations will they always be the same?

Clearly, the answer to this second question is no. For example let us look at two opposite but likely scenarios. Firstly, the cooperative may have motivations which point it in the direction of worker capitalism. With a direct stake within a job – owning democracy within the capitalist system, members will have an incentive to ensure its perpetuity. Rather than fostering opposition to capitalism therefore, the cooperative succeeds in broadening capitalism's popular appeal. Alternatively, the cooperative may be borne out of a demand for more self-determination. Greenberg (1983) refers to a theory of escalation here. The experience of *democracy in the workplace, being an essential* educative tool in the growth of social consciousness, in time translates into the enhancement of more cooperative and egalitarian values and behaviour in a capitalist society.

Greenberg (1981) in studying workers in the American plywood cooperatives and their non-cooperative competitors found that workers in the latter displayed higher levels of confidence in the potential of the working class than did members in cooperatives. He concluded that the cooperative may not therefore be an appropriate educative setting for nurturing a large political movement for change. But one must take into consideration the fact that American plywood cooperatives are not directly comparable to U.K. worker cooperatives. The plywood cooperatives have a clear distinction between members and non-members for example, and do not operate in a political environment where there is an adversarial political labour movement.<sup>2</sup>

Gender politics have also played a role in sectors of the cooperative movement. Assumptions have been made about the positive relationship between feminism and non-hierarchical, non-competitive organisations (see Bookchin 1982 for example). Cooperative work practices and support systems associated with self-management have much to offer women. To many, feminist principles are parallel to cooperative ones. Capra (1983) for example notes that there is

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<sup>2</sup> Further empirical work on American plywood cooperatives has been undertaken by Berman and Berman (1989). They highlight differences between these cooperatives and comparable conventional firms which indicate, amongst other things, that the two productive modes have significantly different production functions.

"... a significant shift in values from the admiration of large scale enterprises and institutions to the notion of small is beautiful, from material consumption to voluntary simplicity ... changed by the rise of feminist awareness originating in the women's movement" (p. 30)

A significant number of cooperatives saw equal status for men and minority groups within the cooperative as important. On top of this many cooperatives were established by women either on feminist principles (e.g. the need to have work determined people other than men), or on principles of particular need (e.g. the provision of flexible working arrangements and shared childcare for women with children). In the latter category women often seemed prepared to accept low wages relative to those in capitalist organisations as a form of trade – off for their preferred work arrangements.

Another set of principles supporting the cooperative organisation are put forward by radical Green thinkers. There is an almost *unquestioned assumption that cooperatives will be the most appropriate* form of economic structure for an ecological society. Capra (1983) for example writes:

"Detailed study of the ecosystems over the past decades has shown quite clearly that most relationships between living organisms are essentially cooperative ones, characterised by coexistence and interdependence and symbiotic in various degrees." (p. 302)

Henderson (1978) sees the formation of cooperatives as important indicators of the emergence of a 'counter – economy', pointing the way to an ecological future. Her main emphasis is in thinking globally but acting locally and therefore in demanding more worker – participation and self – management.

Porritt (1984) is even more specific:

"There is one particular form of small business that is especially important in the eyes of the ecologists, and that is the cooperative. A cooperative is much more likely to be sensitive to the needs of the community in which its members live. The profit motive is linked to a broader collective concern: concern on the one hand that the working members are adequately cared for, and on the other that the cooperative is playing a constructive part in the wider community." (pp. 140 – 141).

#### 4.3.3 Participation in decision – making

According to Fox (1974) a degree of self – determination in the workplace has significant psychological and other advantages for the worker. Thus self – determination is the way in which people can

"... meet their challenges and overcome obstacles, develop their aptitudes and abilities, and enjoy the satisfaction of achievement ... Perhaps the central notion here can be expressed in the language of decision – making, choice and responsibility ... This is the process of self – determination ... A workplace which offers no – or only the most trivial – opportunities for choice, decisions and the acceptance of responsibility is therefore one which offers few opportunities for [psychological] growth." (pp. 4 – 5).

Thus the ability to exercise discretion and participation in decision – making at work not only enhances job satisfaction, but contributes towards the individual's feelings of personal and political efficacy. Many of these issues were discussed in chapter 3.

By virtue of their collective ownership and control through democratic structures, worker cooperatives would seem ideally suited to offering opportunities to participate in decision-making and the exercise of a relatively high degree of autonomy. We may hypothesise that workers in cooperatives should exhibit lower levels of alienation than their counterparts in private firms.

The whole area of employment practices and work practices is also an important area reflecting the behavioural nature of the organisation. We have already noted that many cooperatives are keen to adopt more equitable work practices, particularly with respect to women and minority groups. Recruitment practices have also been discussed. In terms of work practices, democratic decision-making seems important. The allocation of work amongst members of the cooperative was seen in table 3.5 (page 82). This indicates a wide range of allocation devices and mirrors the many different work practices adopted. Whereas we may model the capitalist firm in terms of work aimed at the maximisation of profit, the members of cooperative organisation may see work itself as utility-generating in itself.

#### 4.3.4 Self – development, skills development and training

One of the basic assumptions made as far back as the beginning of the century (Webb and Webb, 1914) is that the working class has the ability to run industry and that people can cooperate at work rather than compete. In addition the people who make up the firm are presumed to carry an ideological commitment not only to cooperation but also to socialism. According to Mellor *et al.* (1988) this hardly represents the real world where job creation is a major priority for many cooperatives, leaving little time to consider the politics of that process.

Nevertheless there is still a common assumption, discussed in part above, that cooperative working can lead to personal development. The democratic work environment may be one in which personal development is easier than in a capitalist hierarchical structure, where a range of constraints are imposed on work. Particularly important here seems to be the issue of training and skills development. It is clear from the survey that many cooperatives see skills development, training and developing high levels of workmanship as important ends in themselves.

#### 4.3.5 Exploitation

Worker cooperatives under capitalism have been criticised for self-exploitation. In particular companies in a position of market dependency facing considerable competition for orders are often forced to cut costs. For most cooperatives the most flexible way to do this is to cut labour costs. Thus wages, holiday pay and the length of the working week are all susceptible to erosion. In a cooperative where a major motive is the creation and maintenance of jobs it will be very difficult for members to resist cuts in wages if it results in additional orders and associated security. But in many other cooperatives the issue is rather more complex. Mellor *et al.* question whether if workers takes a pay cut in order to pay for crèche facilities that really constitutes a pay cut. What about if a cooperative was established by previously higher paid workers who do so to achieve flexible working hours? Clearly, this is not self-exploitation since it reflects a trade off in the individual's utility function between income and other attributes. If a rational positive decision is taken to establish a crèche facility, for example, this must at the very least imply no change in utility. In addition if one adds-in utility derived from job satisfaction and other positive attributes associated with cooperative rather than capitalist production, the self-exploitation argument becomes even weaker.



Stressing the fact that cooperatives are generally just small businesses Webb and Webb (1914) point to other forms of exploitation which is likely in this sector as well:

"... the smallness of their enterprise usually exempts them [members] from any effective legal protection in the form of the Factory Acts. Oppressed by the wholesale and retail traders on either side of them, they become in turn potent instruments of oppression of those whom they employ whether these be members of their own families or the most helpless individuals of the wage-earning class." (p.3)

Clearly, external market conditions will have an impact on the behaviour of the cooperative including the extent of its self-determination. Thus self-determination will often require a degree of specialisation and market segmentation. If this is not possible then the main question becomes, is there a point at which capitalist constraints impinge so strongly on the cooperative that it becomes meaningless to see itself as an independent and autonomous unit? We return to the issue of self-exploitation in chapter 7.

#### 4.3.6 Employment practices and work practices

It cannot be assumed that ownership of a job necessarily equates with complete control over that job. Nevertheless much of the contemporary support for the cooperative enterprise revolves around the belief that they can provide a high quality, more satisfying work environment. Implicit within this is the assumption that cooperative members are free to make decisions and exercise a high degree of control over their working lives. As pointed out previously though, this will depend to a large extent on the relative non-dependency on customers or suppliers.

The scope of decision-making may also be limited by increasing mechanisation as new technology takes on (or is able to at least) jobs traditionally done by members. Some cooperatives may actually choose not to adopt new technology, but if their competitors do then assuming this to be cost reducing, the only way the cooperative can continue to function is by cutting wages. Nevertheless when profit is not the main motive, a cooperative may decide to purchase machinery which is less efficient than others available, but potentially less hazardous to health and safety.

Job rotation is a strategy widely used in the cooperative sector. It allows members a degree of variety in their work and presents an opportunity to acquire a range of skills. While there are benefits for the individual, Mellor *et al.* (1988) argue that the cooperative as a democratic institution will benefit:

"The workforce will develop knowledge and confidence in the operation of the business as a whole, not just one area. This acts as a safeguard against the development of unofficial hierarchies of power based on knowledge and access to information. At the same time, it encourages greater participation in decision-making because cooperators feel more confident of the relevance of their contribution ... " (p. 125)

There are obvious limitations to the practice though. If particular specialist skills are required then job rotation may be impossible. Paton (1978) further notes that job rotation can present problems of efficiency:

"By rotating people quickly through routine tasks, one removes a major incentive for people to develop short cuts, dexterity and carefully arranged methods whereby

those lumbered with such jobs permanently are able to keep one jump ahead ... it may be that such an organisation constitutes the worst possible arrangements as far as the introduction of changes are concerned: no – one has specific responsibility, but everyone is affected ..."

(p. 47)

If a cooperative is in a position to expand then it must make some choices with regard to recruitment policy. This will depend largely on the objectives of the incumbent workers. The membership itself is likely to have an impact on the work environment and therefore the utility of members. Thus the decision to expand is a decision which will be taken with considerable care. Worries about 'breaking up a happy atmosphere' may actually result in the cooperative not expanding employment.

#### 4.4 Issues of Theory and Practice

The neoclassical framework outlined in section 4.2 and the discussion of idealised cooperative principles in section 4.3 raise a number of issues which need to be developed and examined. In particular we need to consider the extent to which models of the cooperative organisation like those discussed in section 4.2 are based on verifiable foundations.

One of the most basic assumptions in the models presented is that decisions take place on the basis of manipulating a utility function containing members' residual income and the size of the membership of the cooperative. But the research reported here tends to indicate that membership of the cooperative is more an historical accident than a rational maximising process. Certainly, most cooperatives expressing a view saw the maintenance of the membership of the cooperative (i.e. employment) as being very important. Again we would support Estrin's (1981) assertion that membership is not a short-run flexible variable. Not only are some members unlikely to leave the cooperative to accommodate higher incomes for those who remain, but they are not going to be dismissed on those grounds by fellow members who have only an equivalent say in the democratic process. Moreover, evidence

suggests that the recruitment of new members is also considered very carefully for a number of reasons including not wanting to damage existing relationships and the atmosphere of the workplace. Commonly, members of the cooperative will work overtime for long periods rather than recruit extra staff. Where recruitment does take place it is commonly on a probationary period basis.

As was seen in section 4.2, much of the literature surrounding the maximand of the labour managed firm assumes that each member behaves in the way that maximises his/her own utility and may be unaffected by the impact of the behaviour of others. This was argued to be a naive assumption when examining any organisational form but in the case of the cooperative, particularly inappropriate. In the case of the income-sharing cooperative one member may be affected by the behaviour of another since one member's effort will in part determine another's income. At issue therefore is the consideration of whether cooperatives demonstrate a degree of altruism as suggested by Stephen (1983), i.e. attach some weight to the impact of their behaviour on others' welfare. A definite answer to this question is impossible on the basis of this questionnaire, but nevertheless amongst the objectives cited by cooperatives one can find mention of worksharing, equal status, democracy, harmony and caring for others. One cooperative listed its objectives as:

"The provision of goods and services required by our customers, to look after our members in every respect, to fly the common ownership flag and to be a caring, sharing community."

The nature of the cooperative and its size relative to many capitalist firms does lend weight to an analysis where we assume that because of like-minded preferences the utility functions of members converge. Although building in a degree of altruism into the neoclassical model does not always rule out a perverse supply response, it does tend to lessen the likelihood of that occurring. Cooperatives are often established by groups of friends or previous workplace colleagues. Often this is done in response to closure where the workers experiences will be similar. Often the political motivations of the establishing members will be very similar and therefore their motivations and behaviour largely convergent.

Indications from the survey suggest that motivations are not only largely consistent within the firm but also between many cooperatives. Moreover we can see that aims are rarely identified with the maximisation of financial variables. Only twelve cooperatives in the sample actually mentioned good rates of pay and profitability as being

an aim. More often the aim was in some other direction with a proviso that the cooperative had to be viable in order to maintain jobs.

What seems very important therefore is that we should be able to consider the motivations of the cooperative which implies understanding something of the behavioural patterns which exist within the organisation. At issue is the question as to whether these behavioural patterns, which can change between situations as well as over time, are capable of being modelled in a conventional neo – classical way. These issues are more associated with the discussion of section 4.3.

But in many cases motivations may be even wider than just the firm level. Eight cooperatives from the sample indicated that they saw working with and responsibility towards the community as being an important aim. Thus in order fully to model this sort of cooperative some sort of account needs to be taken of the utility to be derived from community projects by both the cooperative members and indeed the community itself. This would seem to be a formidable task and for now it is put aside.

Since we are therefore hypothesising that in the main the objectives and motivations of the firm depend on the members therein we need to be able to examine some of the characteristics of the members.



The second questionnaire asked respondents about the age structure of the cooperative. Of the 40 cooperatives which provided enough information to be useful we find that the average age of a cooperative member is 34.7 years with a standard deviation of 7 years. This is clearly younger than the average age of the working population. We might hypothesise that age might be a significant factor in the political motivations displayed by the cooperative. Therefore splitting our sample into two parts according to political motivations as described in chapter 2 we find the following:

Type of coop.	no. of firms	average age (years)	standard deviation (years)
politically motivated	18	31.7	6.2
non – politically motivated	22	35.9	7.5

Table 4.4

Given the sample size, the statistical significance of any difference is in doubt. But what is perhaps more interesting is the size of the standard deviation indicating that there is often not a wide spread of age ranges in the typical cooperative. This is perhaps less surprising when we consider that many cooperatives are formed by friends or

previous work colleagues.

Another possibility is that there will be regional differences in the behaviour and motivations of cooperatives. For example we might hypothesise that cooperatives in relatively depressed areas will be interested more in the maintenance of jobs than other motivations. Using the same split between politically motivated firms we find:

Type of coop.	Number of firms in:					
	North	Midlands	Wales	Scotland	London	South
politically motivated	9	4	2	7	5	2
non – politically motivated	9	9	0	2	4	7

Table 4.5

Again, split like this, the sample does become small and we must be careful about statistical significance. But overall there is no real difference, with the North – an area where we might have hypothesised differences – being split equally. If we examine cooperatives who mentioned somewhere in their response to either questionnaire the importance of employment the regional split is as follows:

North	Midlands	Wales	Scotland	London	South
10	3	3	6	9	5

Table 4.6

Again no discernable differences are clear and the relatively high numbers for the North and London just mirror the fact that more responses to the questionnaire came from these areas anyway.

Thus a broad analysis (by age and region) of the characteristics of cooperative members does not add much more information to the analysis. Nevertheless we must accept, almost de facto, the argument that the characteristics of the cooperative are dependent largely on internal members and relations. As Wiles (1977) points out the firm has no objectives of its own, only the individuals within it.

#### 4.5 Concluding Remarks

Not all cooperatives are 'ideal' cooperatives. Nor would many want to accept the categorisation made by Mellor et. al. What is very clear is the diversity in aims and objectives of cooperatives and although we

have split the sample in two according to the degree of political motivation this definition in itself is very loose and hides a multitude of differences. This diversity itself implies a range of a different objective functions for the cooperative sector. Implicitly we have accepted the need for a degree of behavioural type modelling based on the behaviour and motivations of members. Whilst we may hypothesise that cooperative members may have more similar utility functions than workers in the traditional capitalist firm by virtue of the very fact that they have come together in a cooperative enterprise this does not mean that there is no need to see the enterprise as a satisficing coalition. In these circumstances we need to consider very carefully whether neo-classical modelling based on the maximisation of anything, even subject to 'realistic' constraints is suitable.

Cooperatives tend not to follow set behavioural patterns which make them capable of modelling. Their relative size and democratic process makes them more flexible often than the capitalist firm. For example in times of poor demand for their product, members of the cooperative are far more likely to accept a pay cut, or to work overtime without payment than a worker in a traditional firm.

Moreover, any modelling of the cooperative enterprise must take account of the utility functions of its members. When, as is often the

case, those utility functions contain implicit trade – offs between income and more socially oriented objectives, such as good relations with the community or ecological considerations or adherence to a particular political movement or gender politics, then this becomes almost impossible. Nevertheless a key area of consideration is that of growth within the cooperative firm. Some theoretical models of growth within the labour – managed enterprise do provide us with testable conclusions and it to this which we turn our attention in the next chapter.

However, Vanek (1970) reminds us that firms do not have to explicitly income – maximise. He claims that much of their behaviour does follow the sort of predictions which this model makes. Centrally, to my mind, is the idea that the cooperative will be willing to trade – off employment for income. From the second questionnaire we do have some evidence relating to this from 40 cooperatives. Cooperatives were asked what their actual growth rates in terms of turnover, employment and income had been. We are interested in any cooperatives who in that period had had a growth in incomes but a decline in employment. Six cooperatives actually fall into this category. In none of these cases were members forced to leave, rather they left either for retirement or for another job (in one case to establish another complementary cooperative in the area). Nevertheless we may ask why their position was not replaced. Although the range of possible answers, including

not wanting to damage a good atmosphere for example, will not prove a case either way. On the other hand out of 24 cooperatives who had actually increased employment, 19 did so whilst increasing income as well and five did so whilst income stayed the same. Overall then maybe a little evidence for Vanek's claim?

A more productive line to take may parallel traditional profit – maximising modelling where it is assumed that a proportion of profits is consumed by management within the firm (see Cowling, 1982 for example). We might assume that cooperatives do income maximise but that some of that income is consumed internally by following other objectives. It might be the case that the members of the cooperative catering for vegetarian tastes, for example, could have a higher income if it served a wider market and produced non – vegetarian food as well.

Even if we cannot fully reject a neoclassical analysis of the cooperative firm we must ask about its usefulness in describing and predicting the behaviour of the U.K. cooperative sector. Evidence cited here tends to suggest that only in a few cases has this happened and that the sheer diversity of the cooperative sector makes any other result almost impossible.

## **CHAPTER 5**

# **GROWTH ASPIRATIONS AND GROWTH RATES OF THE COOPERATIVE FIRM**

### 5.1 Introduction

The purpose of this chapter is to examine performance in the guise of growth aspirations of manufacturing cooperatives in the U.K. The theoretical literature on cooperative firms has in the past concentrated on distinguishing them from their capitalist counterparts by means of differing objective functions. In the main this has involved neo-classical analysis of aspects such as membership adjustment (Ireland and Law, 1982), finance (Furubotn and Pejovich, 1970) and efficiency

(Ichiishi, 1977). The seminal work of Vanek (1970) and Ward (1958) and consequent supply – side tendencies which this approach implies has been the subject of much debate (see for example Ireland and Law, 1982 and Bonin and Putterman, 1987). This chapter sets out to examine the basic objectives of our group of cooperatives and link these to issues surrounding growth and performance.

After an examination of the broad principles surrounding the performance – participation nexus and the objectives of the cooperative the chapter examines the growth aspirations of the cooperative firms in the survey. Aspirations are important because they reflect the planned behaviour of the enterprise, their actual behaviour being clouded by a range of exogenous events. Probit analysis is used to find the characteristics of the enterprise which make it more probable that it will have high growth aspirations. Following this there is an extension of the analysis into examining behavioural patterns of the enterprises in terms of their political motivations. Much of the impetus for this analysis comes from the work of Daudi and Sotto (1985) who have been critical of the political motivations of Western cooperatives. In the later sections of the chapter actual growth rates of a subset of cooperatives are examined and compared with aspirations. Before some final remarks, we examine the determinants of management structure and perceived productivity advantages (which we shall see become



important determinants of growth) in terms of the other exogenous variables.

## 5.2 The Participation – Performance Nexus

The chapter attempts to make a contribution to the participation – performance nexus to which much attention has been paid in recent years, and to further examine the supply – side constraints assumed of the labour – managed firm by Illyrian analysis. The work by Estrin, Jones and Svejnar (1987) for example, finds that in general, for western economies, the overall effect of participatory schemes in producer cooperatives is positive, although growth is not examined specifically.

Whilst the analysis here concentrates specifically on one aspect of performance, namely growth, it is indicative of the attempt to examine the theoretical claims made of the labour – managed firm. From a purely neo – classical stance the issue of growth within the cooperative firm based on a restrictive analysis by Ward (1958) and others is the one which may have damaged the cooperative movement amongst academics. Research is still needed to discover the reality behind the theory.

As Estrin, Jones and Svejnar (1987) point out there has been very little formal modelling of key relationships associated with worker participation. Central here is the question as to whether cooperatives will plan to grow as fast as their capitalist counterparts or whether there may be reasons to believe that productivity effects will have a negative or positive influence on growth aspirations.

On the positive side participation is likely to generate superior labour morale, greater team spirit and consequently an increased incentive towards effort. It may also improve a firm's organizational efficiency, flexibility and willingness to innovate. Moreover, as Jones and Svejnar (1985) argue participation may also result in lower absenteeism, better workmanship, superior information flows and superior monitoring of effort and quality. This may all manifest itself as optimism with regard to growth.

On the negative side, the strongest case is made by Jensen and Meckling (1979) who see participation as always having negative effects on productivity. The focus tends to be associated with trade-offs between efficiency and joint-decision making because of problems of group preference formation. Even if this can be overcome, it is suggested that decision-making will be slow and cumbersome.

The assumed lack of managerial leadership and the nature of that management within a cooperative enterprise has also been cited by some (for example even as early as 1920 by Webb and Webb) as a reason for inefficiency in the participative firm. Although, the assumed restrictive nature of management, (e.g. the requirement that management in a cooperative should rotate which is stressed by Williamson, 1980) may not always resemble that which occurs in the real world.

In the analysis of the traditional capitalist firm the dominant assumption has been the maximisation of profits. We have already argued that in the case of worker cooperatives two common characteristics may lead us to challenge the assumption of profit maximisation even more; political and ideological reasons and the small size of firms.

The survey undertaken attempted to elucidate the objectives of the cooperative. Respondents were asked how important a number of factors were in the establishment of the cooperative. Table 2.3 (page 30) summarised the responses showing up a clear importance of the atmosphere at work, wanting to work for oneself, the provision of a particular product and a desire for equality with fellow workers.

### 5.3 Growth and the Cooperative firm

It is often claimed that the labour – managed firm will tend to grow at a slower rate than its capitalist counterpart. The work of authors such as Ward (1958), Atkinson (1973) and Bonin (1983) represents a theoretical demonstration that the labour – managed firm chooses a lower rate of growth than the profit – maximising firm in certain restrictive circumstances. Casually, one may expect that growth which results in an expansion of the labour force and consequent diluting of the authority of original members, may be resisted. At the least the expansion of the workforce needs to result in a proportional expansion of the surplus if members are not to be made worse off by following a growth strategy.

Atkinson's (1973) starting point in analyzing growth is to recognise that in the labour – managed firm, like in any firm, there is likely to be some separation of ownership and control. In a large LMF it is easy to imagine that the direction of policy would be in the hands of a manager, who although elected and accountable, would enjoy a degree of discretion. It is therefore interesting to compare growth in a capitalist firm with growth in an LMF where managerialism exists in both.

This can be done with the aid of a simple model derived from Solow (1971) and Atkinson (1973). The basic assumptions of the model are as follows:

1. There is no substitutability in production between labour and capital.
2. There is labour – augmenting technical progress at a rate  $\Gamma$  such that

$$L_t = aK_t e^{-\Gamma t} \quad (5.1)$$

where  $L_t$  is labour employed and  $K_t$  is capital stock at time  $t$ .

3. There are economies of scale and output,  $Y_t$ , is given by:

$$Y_t = bK_t \mu \quad (5.2)$$

4. The firm is facing a downward sloping demand curve for its output. This shifts outward over time at a rate  $G_0$ . However, if the firm spends money on sales promotion it can expand its sales, at any given price, at a faster rate than  $G$ .

5. It is assumed that the firm makes a once and for all decision about its price which is constant over time and about its rate of growth which is a constant proportional rate.
6. Output grows at a rate  $G$  so that capital stock grows at a rate  $G/\mu$  which must be less than  $G$ . Thus

$$K_t = K_0 e^{(G/\mu)t} \quad (5.3)$$

7. The net revenue of the firm is given by

$$R_0 e^{Gt} - F(K_0) T(G) e^{Gt} \quad (5.4)$$

where the function  $F$  represents gross revenue and the function  $T(G) = 1 - s(G)$  where  $s(G)$  is the expansion cost as a proportion of sales revenue. We assume the  $T(G)$  has the shape depicted in figure 5.1

8. It is assumed that the gross revenue per unit of capital at time zero  $(F(K_0)/K_0)$  has the slope given in figure 5.2. For this to hold we require that the elasticity of demand be a declining function of  $K_0$ . Atkinson (1973) shows that this is a reasonable assumption.

Figure 5.1

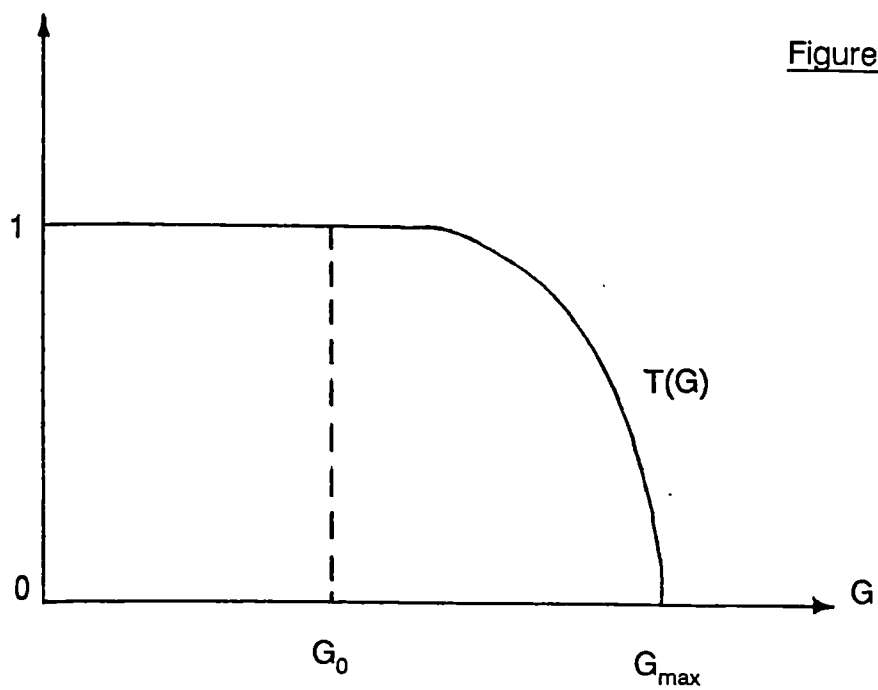
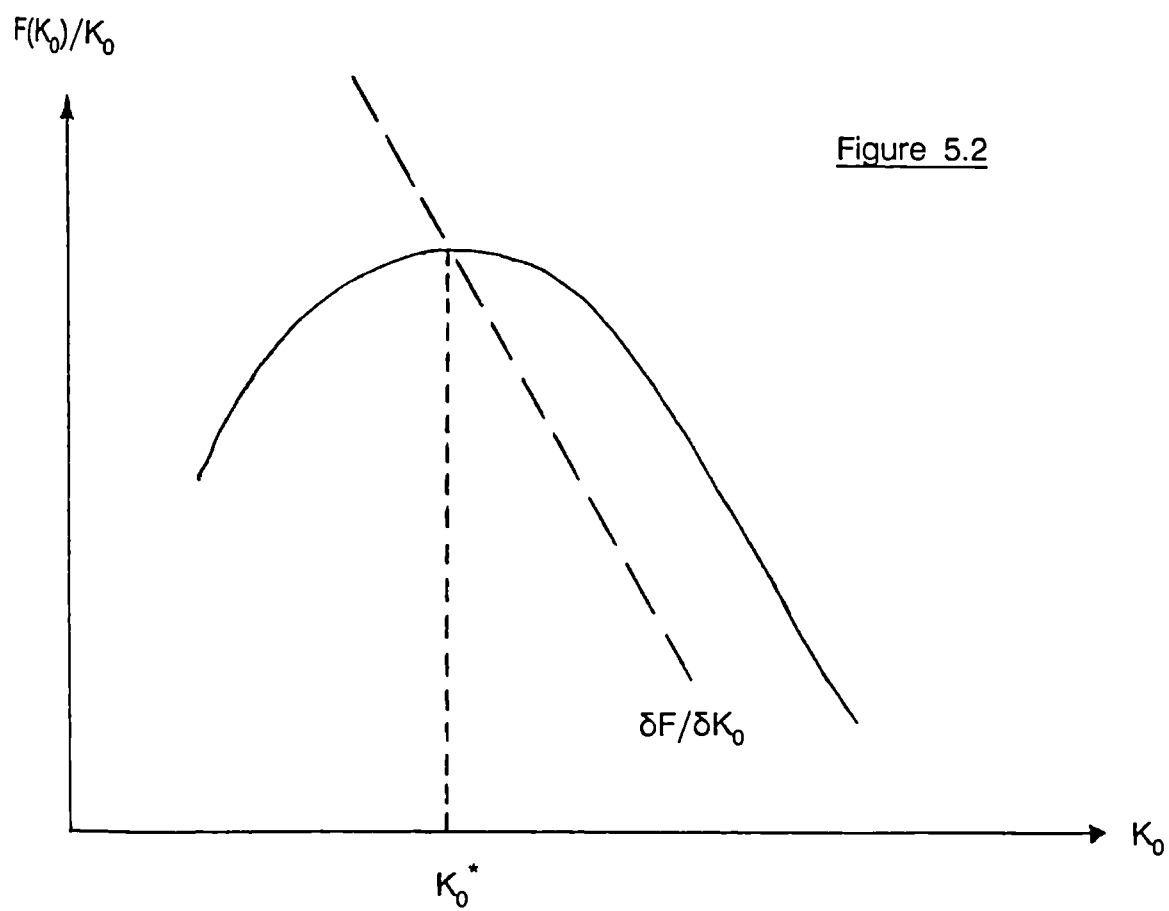


Figure 5.2



9. We assume that the firm aims to maximise the present value of dividends at a discount rate  $\alpha$ .
10. We assume that all capital is financed by borrowing at an interest rate  $i$ . There are no intermediate inputs or outputs and no hired workers. We ignore depreciation. Thus the net income of the LMF is given by

$$R_0 e^{Gt} - ip_K K_t \quad (5.5)$$

where  $p_K$  is the price of capital goods.

If the firm is egalitarian then the dividend rate is equal for all workers:

$$d_t = (R_0 e^{[(G+\Gamma) - G/\mu]t})/aK_0 - (ip_K e^{\Gamma t})/a \quad (5.6)$$

Thus the present value of dividends over an infinite time horizon is given by

$$D_0 = [R_0/aK_0][1/(\Omega - G(1 - 1/\mu))] - ip_K/a\Omega \quad (5.7)$$

where  $\Omega = \alpha - \Gamma$



The LMF will choose  $K_0$  and  $G$  to maximise  $D_0$ . Consider first the scale of operations ( $K_0$ ). The maximisation of  $D_0$  requires that gross revenue per unit of capital be maximised, i.e. point  $K_0^*$  in figure 5.2. It can be seen that at point  $K_0^*$  the elasticity of demand is equal to  $(\mu/\mu - 1)s$ .

Consider now the determination of the growth rate. Assuming that second-order conditions will be satisfied we derive first order conditions by differentiating with respect to  $G$ :

$$-\delta R_0/\delta G = [R_0(1 - 1/\mu)]/[\Omega - G(1 - 1/\mu)] \quad (5.8)$$

which can be written

$$-T'(G)/T(G) = 1/(a - G) \quad (5.9)$$

where  $a = \Omega/(1 - 1/\mu)$

In other words the LMF equates the marginal cost of an extra unit of growth, in terms of revenue foregone, with the present value of the gain arising from economies of scale. If there were no economies of scale ( $\mu = 1$ ), the LMF would choose  $G_0$ . Thus it is only economies of scale in the basic model which make the firm interested in growth. It

is both independent of the rate of interest and the choice of  $K_0$ . The growth rate chosen is however a decreasing function of  $\Omega$ , which can be seen as the "effective" discount rate. The higher  $\Omega$ , the lower the growth rate chosen and in the extreme case where workers are only concerned about current dividend  $d_0$ , the growth rate chosen would be  $G_0$ .

It seems reasonable to compare this outcome with that of the capitalist firm. Assuming that the capitalist firm (CF) has the same production function and prices as the LMF and that the wage rate ( $w_t$ ) is equal to the LMF's dividend rate (at least initially), we can set out the basic model.

We assume that the CF finances its capital formation out of retained earnings. The dividends paid to shareholders at time  $t$  are equal to the net revenue minus wages minus retained earnings:

$$R_0 e^{Gt} - aw_t K_t e^{-\Gamma t} - p_K K_t (G/\mu) \quad (5.10)$$

Assume that the wage rate rises at a rate  $\Gamma$  such that  $w_t = w_0 e^{\Gamma t}$ . The stock market value of the firm is assumed to be equal to the present value (at the market rate of interest  $j$ ) of the dividend payments to shareholders:

$$V_0 = R_0/(j - G) - (K_0/(j - G/\mu))[aw_0 + (G/\mu)p_K] \quad (5.11)$$

where we assume  $j$  to be greater than  $G_{\max}$  and hence greater than  $G_{\max}/\mu$ .

The CF is assumed to maximise the difference between its stock market value and the value of capital employed:

$$Z_0 = V_0 - p_K K_0 = R_0/(j - G) - (K_0/(j - G/\mu))[aw_0 + j p_K] \quad (5.12)$$

The scale of the firm is determined simply by

$$\begin{aligned} \delta R_0 / \delta K_0 &= (aw_0 + j p_K)[(j - G)/(j - G/\mu)] \\ &= R_0/K_0 - (Z_0/K_0)(j - G) \end{aligned} \quad (5.13)$$

Thus the CF can achieve a strictly positive value of  $Z_0$  if market conditions are right, implying that its scale will be larger and therefore its price lower than with the LMF. This result corresponds with that of Vanek (1970).

In choosing its rate of growth (assuming second order conditions are satisfied) the CF sets

$$\begin{aligned}
 -\delta R_0/\delta G &= R_0/(j-G) - [K_0(j-G)/\mu(j-G/\mu)^2][aw_0 + jp_K] \\
 &= Z_0 + [jK_0(1-1/\mu)/(j-G/\mu)^2][aw_0 + jp_K] \quad (5.14)
 \end{aligned}$$

Where  $Z_0$  is strictly positive, the growth rate is greater than  $G_0$  even if there are no economies of scale. Thus there appears to be a significant difference between the two types of firm. If we combine 5.13 and 5.14, the first order condition for  $G$  is:

$$\begin{aligned}
 -T'(G)/T(G) &= 1/(j-G) - 1/\mu(K_0\delta R_0/R_0\delta K_0)(1/(j-G/\mu)) \\
 &= 1/(j-G) - (1-1/\tau)/(j-G/\mu) \quad (5.15)
 \end{aligned}$$

where  $\tau$  is the elasticity of demand.

However, the basis for comparison between the LMF and CF is less straightforward than in the static models considered by Ward and Domar. Essentially the model consists of two new elements:

- a) the comparison of a time path of payments to labour rather than just the current remuneration; and
- b) the specification of the rates of time discount applied by shareholders and workers.

The assumption made here is that the present value of wages paid by the capitalist firm is equal to the present value of dividends:

$(D_0 = w_0/(\alpha - \Gamma))$  and that the rate of discount used by the CF is equal to the rate of interest paid by the LM firm ( $j=i$ ).

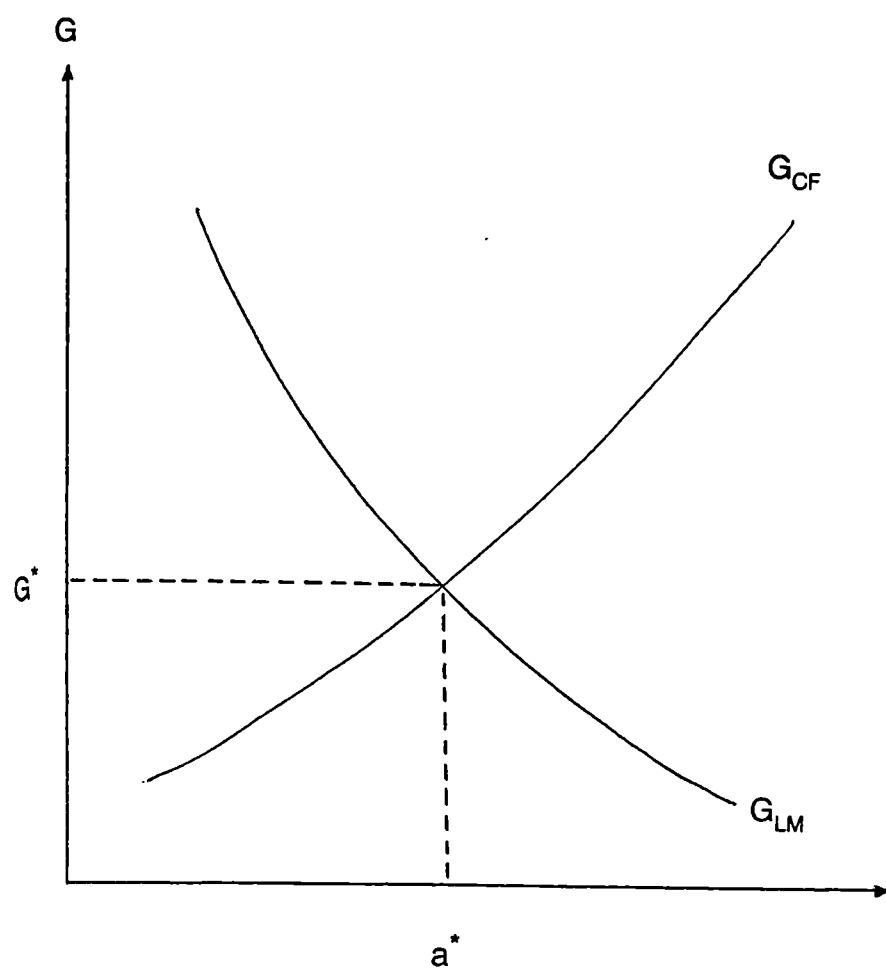
From equation 5.7 these assumptions imply that:

$$H = aw_0 + ip_K = R(K_{LM}, G_{LM})/K_{LM} - a/(a - G_{LM}) \quad (5.16)$$

The value of  $G_{LM}$  and  $H$  are declining functions of  $a$ . The value of  $H$  in turn influences  $G_{CF}$  through its effect on  $K_{CF}$  and hence in (5.15). It can be shown that  $G_{CF}$  is a declining function of  $H$  and hence a situation such as that shown in figure 5.3.

There is therefore a value  $a^*$  such that for  $a$  less than  $a^*$  the first order conditions indicate a faster rate of growth for the LM firm, and for  $a$  greater than  $a^*$  the CF grows faster.

Figure 5.3



Atkinson (1973) goes on to show that the results can be more accurately summarised as follows:

- a) if the workers' effective discount rate is greater than or equal to that of the shareholders, then the capitalist firm grows faster; and
- b) if the workers' effective discount rate is less than  $j$ , then either the capitalist firm grows faster or the capitalist firm cannot break even.

More recent theories of the firm have, of course, emphasised the separation of ownership and control. Thus it would be more useful to compare the LM firm not with the capitalist firm but with the managerially controlled firm which may be more typical of modern advanced economies.

The model of the managerial CF firm presented here is based on the work of Marris (1964). Managers aim to maximise the rate of growth subject to a potential takeover constraint. This constraint can be formulated in terms of the valuation ratio where  $V_0$  must be greater or equal to  $mp_K K_0$ , where  $m$  is a constant and less than or equal to 1. This can be written as:

$$Z_0 = -(1-m)p_K K_0 \quad (5.19) \text{ or;}$$

$$R_0/K_0 = (j-G)[mp_K + (aw_0 + G/\mu)p_K]/(i-G/\mu) \quad (5.20)$$

For any  $K_0$  we can find the greatest  $G$  that satisfies (5.20). Thus the managerial firm will choose  $K_0$  to maximise  $R_0/K_0$  i.e. the same scale of output as the LMF.

In order to compare growth rates of the MCF and the LMF, assume that the present value of the payments per worker are equal and that  $j=i$ . Consider first the case where  $m=1$ . Let  $Z_0^*$  be the value of the CF with  $K=K_0^*$ , then for  $H$  such that  $Z_0^*$  is positive, the growth rate for the MCF is greater than that of the CF. Hence we can deduce that  $G_{MCF}$  will be greater than  $G_{LMF}$  where  $H$  is such that the CF can break even. However, if  $m$  is less than unity it is possible for the reverse to be true.

In the model of the LMF we have assumed the maximisation of income per worker. In practice however, the direct control of the LMF may be in the hands of appointed managers creating a managerial LMF (MLMF). The managers although accountable to the membership may be able to pursue some of their own goals.



There will of course be constraints on the managerial discretion. It seems reasonable to suppose that workers are concerned with the level of dividend and that any dividend below a certain level will result in the dismissal of managers. The objectives of managers are difficult to specify but we might assume that like their counterparts they will be interested in the rate of growth of the enterprise.

On these assumptions the aim of the MLMF can be seen as maximising  $G$  subject to

$$ad_0 = R_0/K_0 - ip_K \quad (5.21)$$

The firm chooses  $K_0$  such that  $R_0/K_0$  is maximised. The growth rate however is increased to the point where (5.21) holds with equality and if  $d'$  is less than the current dividend paid to the LMF, the MLMF grows faster. To this extent, allowance of managerial discretion narrows the gap between the capitalist and labour – managed enterprise.

The separation of ownership from control thus tends to increase growth in both the LMF and CF. Whether a MLMF will grow as fast as or faster than the MCF will depend on the degree of managerial discretion. Two qualifications must nevertheless be considered. Firstly, the goals

of managers in the MLMF may be rather different to those assumed and secondly, no account is taken of the distributional changes that would accompany the introduction of labour management in this analysis.

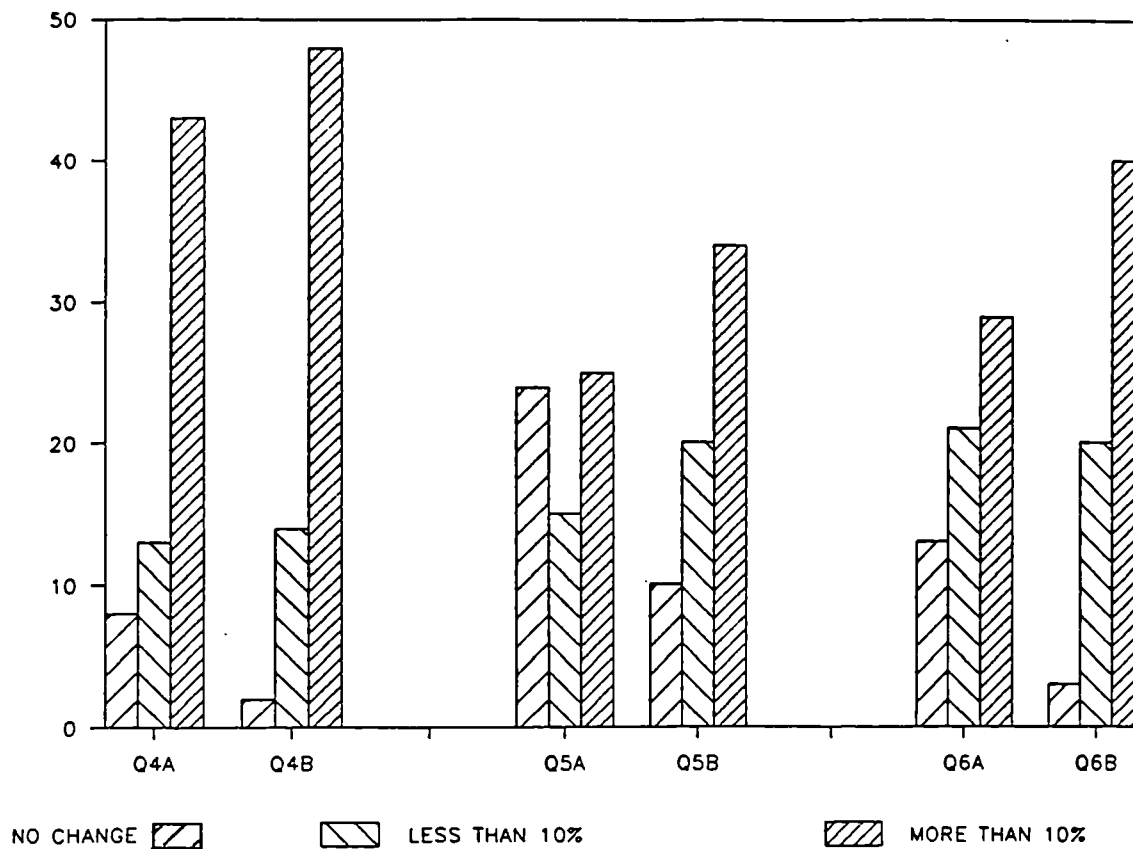
Whilst it was never the intention of this thesis to provide a direct comparison of a sample of labour – managed and capitalist firms (and we are able therefore to say few things about comparisons between CF and LMF production) we do know which cooperatives in the sample appoint managers and we can test Atkinson's view that managerial discretion in the LMF will increase growth rates.

#### 5.4 Survey Results

The results of the survey certainly do not reflect a view that cooperatives will not want to grow. No respondents expected a decline in terms of the definitions of growth used: turnover; employment; and incomes of members. The distribution between those anticipating no growth, a growth rate of less than 10% per annum and a growth rate of more than 10%, over the next 12 months and three years, is shown in figure 5.4. In every case over each time period the majority of respondents expected growth by more than 10%.

Figure 5.4

## ANTICIPATED GROWTH RATES



### Questions from the questionnaire:

- Q4 To what extent do you expect your cooperative to grow in terms of turnover in the next:
- A. 12 months
  - B. 3 years
- Q5 To what extent do you expect employment in the cooperative to expand in the next:
- A. 12 months
  - B. 3 years
- Q6 To what extent do you expect incomes of the members of the cooperative to expand in the next:
- A. 12 months
  - B. 3 years

A relatively large proportion of respondents did expect employment not to change even though some of them expected turnover to increase by more than 10% even in the short term. This may lend support to the view that some cooperatives do not wish to expand employment. In the past the reason for this has been seen in terms of selfishness (i.e. not wanting to dilute the shared surplus) but other rational reasons might include not wanting to risk losing a good atmosphere or the relationships between members (see for example Miyazaki, 1984). On the other hand with cooperative enterprises being on average so small, an increase in membership even by one person is a large, discrete change. Hence it is perhaps not surprising that some cooperatives expect a significant change in turnover without increasing membership.

We have categorised the growth aspirations of the 78 cooperatives in the survey into those expecting high growth (over 10% per annum) over a 3 year time period and those expecting low growth (less than 10%) or no growth. The distribution of cooperatives is then as follows:

## ASPIRATIONS OF GROWTH OVER A 3 YEAR PERIOD

	TURNOVER	EMPLOYMENT	INCOMES
HIGH GROWTH	55	39	47
LOW GROWTH/ NO GROWTH	23	39	31

Table 5.2

Allocating a 1 to a cooperative with high growth aspirations and a 0 otherwise it is possible to examine the determinants relating to the probability of being optimistic about growth or otherwise. This is a simple application of Probit analysis.

A priori we may hypothesise that growth aspirations may be linked to the objectives and reasons for existence of the cooperative (table 2.3). If we allocate a 1 to objectives which were very important and a 0 to those which were not important we have an index of the degree of importance of each objective.

It has already been suggested that those cooperatives who believe there to be productivity advantages associated with the cooperative form of organisation may consequently be more optimistic about growth. Thus by allocating a 1 to those cooperatives who believe there to be productivity advantages and a 0 otherwise we have another index of

the degree of importance of each objective. Similarly we can index information about the members' capital stake in the cooperative and the degree of managerialism in the following ways:

<u>Members' financial stake in in company</u>	Value imputed
100%	1
Between 50% and 99%	0.67
Between 1% and 49%	0.33
Nil	0

Table 5.3

<u>Degree of managerialism</u>	Value imputed
All members decide democratically on all decisions	0
Manager(s) responsible for day – to – day decision making	0.5
Manager(s) responsible for day – to – day decision making and policy decision	1

Table 5.4

### 5.5 Probit Analysis

Since we might expect there to be different reasons for growth aspirations in terms of turnover, employment and members' incomes we

will deal with each one in turn. Variable names are given in brackets.

Firstly though we should be clear about divisions between exogenous and endogenous variables. In the first instance we are assuming that our measures of growth aspirations can be determined by the exogenous variables which will include all variables relating to the objectives of the cooperative, the management structure, attitudes towards the productivity of cooperative structure, capital stake and the size of the cooperative. Issues associated with this categorisation are reexamined in section 5.11.

#### 5.5.1 Turnover (TO)

As far as the objectives of the firm are concerned we may hypothesise that those cooperatives who see the provision of a particular product as important (PPRO) will wish to maximise the sales of that product and may therefore seek a high turnover. Similarly if an important objective is seen as working for oneself (YOU) then we may expect the same effect. An interesting hypothesis to test is whether members in a cooperative where they have a high capital stake (K) will look towards a high growth strategy. As we have seen Atkinson (1973) suggests that an important determinant to the extent of turnover is the degree of managerialism (MAN).

We may also expect that those who believe there to be productivity advantages (PROD) will expect higher turnover. The size of the cooperative (SIZE) may also be important. Thus if we estimate this hypothesised relationship using Probit we get the following results:

DEPENDENT VARIABLE: TO  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
CONSTANT	0.0434	0.4232
PPRO	– 0.9749	0.4215
YOU	0.2703	0.4465
K	0.7134	0.3501
MAN	0.8065	0.5261
PROD	1.0313	0.3623
SIZE	0.0011	0.0047
LOG LIKELIHOOD	– 36.4268	
AVERAGE LIKELIHOOD	0.6269	
CASES CORRECT	61	

Table 5.5

Given this specification the only coefficients significantly different from zero are PPRO, K and PROD. Leaving out the least significant of the variables (CONSTANT, YOU and SIZE) an alternative specification yields:



DEPENDENT VARIABLE: TO  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
PPRO	- 0.7730	0.3020
K	0.5107	0.2003
MAN	0.4873	0.2217
PROD	0.6623	0.2814
LOG LIKELIHOOD	- 40.0262	
AVERAGE LIKELIHOOD	0.6054	
CASES CORRECT	62	

Table 5.6

All coefficients are significant at the 95% level. Thus if a cooperative has a high degree of managerialism (which accords with Atkinson, 1973), a strong capital stake on the part of members and believes there to be productivity advantages associated with cooperative organisation it is more likely to be optimistic in its growth aspirations regarding turnover. The provision of a particular product however, has a negative impact upon growth aspirations, which is opposite to that hypothesised. A possible explanation for this is that there may be a trade – off between the production of a particular good and high growth aspirations. For example in the survey, one cooperative producing cruelty – free cosmetics, clearly thought that they could expand into

more traditionally produced goods but had decided not to in order to maintain vegan principles. This sort of trade – off seems to represent a rational decision on the part of some cooperatives to maintain an important principle of socially – useful production for example. Indeed it is for these sorts of reasons that many enterprises established themselves as cooperatives rather than traditional small firms in the first instance.

#### 5.5.2 Employment (EMP)

Looking at the objectives of the firm first, our basic hypothesis must be that firms who value a good atmosphere (ATM) and equality (EQU) amongst the workforce will not be keen to increase the size of the workforce. Thus we would expect negative coefficients on these variables. But on the other hand managers may be keen on this since it increases their own prestige and thus we include the MAN variable again. We may also expect that where there is a high capital stake in the company workers will not want employment increasing policies for fear of it diluting membership surplus. Including our productivity variable and the size of the cooperative (for the reasons outlined above) our estimation is as follows:

DEPENDENT VARIABLE: EMP  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
CONSTANT	– 0.2680	0.4608
ATM	0.3676	0.6181
EQU	0.5531	0.5971
MAN	1.1988	0.5442
K	0.6897	0.5093
PROD	0.8842	0.3232
SIZE	– 0.0290	0.0201
LOG LIKELIHOOD	– 42.1251	
AVERAGE LIKELIHOOD	0.5827	
CASES CORRECT	60	

Table 5.7

The objective variables surrounding atmosphere and equality in the workplace (ATM and EQU) are insignificant and also have the wrong expected sign and are therefore excluded. Our capital stake variable, K, and the constant are also insignificant. SIZE is insignificant but its negative sign, implying some degree of perversity is what might be expected from an Illyrian model and therefore it is left in the model. Thus a respecification of the model yields:

DEPENDENT VARIABLE: EMP  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
MAN	0.8848	0.4042
PROD	0.6550	0.2687
SIZE	− 0.0400	0.0188
LOG LIKELIHOOD	− 46.8393	
AVERAGE LIKELIHOOD	0.5485	
CASES CORRECT	53	

Table 5.8

All the coefficients are significant but the overall model is less satisfactory. The implication being that information has been lost in reducing its scope. Nevertheless interesting is the continued importance of managerialism and of productivity beliefs. The negative (now significant) sign on SIZE indicates that as the membership gets to larger levels the tendency to increase membership further is reduced. This may imply some sort of ceiling on the number of members of the typical cooperative enterprise, perhaps because of an unwillingness to dilute members' influence as discussed in chapter 3. Alternatively, it may be that there is some sort of efficient scale for cooperatives and the small cooperatives are growing to that equilibrium position.

Thus the Illyrian analysis arguing that the growth rate amongst cooperatives is likely to be low in terms of employment is given limited support but there seems little evidence that workers will actively seek to restrict employment for reasons of self – interest.

### 5.5.3 Incomes of Workers (INC)

To the cooperative member, the opportunity to reap the full rewards of the enterprise surplus rather than see it syphoned off by the owners of capital must be important. Thus we may expect those who see working for oneself (YOU) as an important objective of the cooperative to strive for higher incomes. Those with high capital stakes may also expect proportionately higher returns and managers may strive for higher incomes for members as a way of maintaining their position. Thus we include MAN and K variables again. Including productivity and employment variables for the same reasons as stated above our model becomes:

DEPENDENT VARIABLE: INC  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
CONSTANT	- 1.0163	0.4003
YOU	1.0156	0.4077
K	1.2422	0.5348
MAN	- 0.2455	0.4792
PROD	0.6678	0.3251
SIZE	- 0.0039	0.0036
LOG LIKELIHOOD	- 40.2115	
AVERAGE LIKELIHOOD	0.5971	
CASES CORRECT	57	

Table 5.9

MAN and SIZE are insignificant. Interestingly whilst highly important before MAN even has the wrong sign. Perhaps managers whilst interested in a growth in turnover and employment which increases their prestige directly are less likely to be interested in the incomes of the whole membership. Re – estimation of the model yields:

DEPENDENT VARIABLE: INC  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
CONSTANT	– 0.9429	0.3492
YOU	0.9009	0.3914
K	1.2889	0.5339
PROD	0.6250	0.3108
LOG LIKELIHOOD	– 40.9345	
AVERAGE LIKELIHOOD	0.5917	
CASES CORRECT	56	

Table 5.9

The constant remains highly significant and negative indicating that expectations of significant increases in incomes in the cooperative sector are generally low. This is often confirmed by anecdotal evidence. YOU, K and PROD all have positive significant impacts on the probability of a cooperative growing fast in terms of income. This tends to support the view that members will expect a reasonable return on capital particularly if they perceive there to be productivity advantages of cooperative organisation. One might also hypothesise that the direction of causation is the other way as well; specifically, that K may be high because of the income growth anticipated. In addition

much of the impetus of working for oneself may be directed toward higher incomes. Although we must remember that in many cooperatives that income base is likely to be low in the first place.

## 5.6 Discussion

The hypotheses on which the models are based are clearly highly subjective. Others may agree or disagree with much of the a priori reasoning. But what is significant is that much of this reasoning with regard to the objectives of the firm has proved to be very weak. Indeed only in one case, that of wanting to work for oneself when examining income aspirations, do we find that an objective of the cooperative is important. On fundamental issues such an equality in the cooperative no significant evidence of this influencing growth aspirations is found. Elsewhere (Welford 1988, Daudi and Sotto 1985) it is suggested that much of the reason for this is to do with a large section of the cooperative movement not adhering to traditional "cooperative" principles.

What seems very important, and somewhat surprising to the purist, is the importance of managerialism in the growth aspirations. With regard to turnover and employment a high degree of managerialism tends to



lead to a higher probability that the cooperative will have high growth aspirations. This seems to support the Atkinson model outlined above, although whether the reason for this is managerial discretion or something else is not clear. It may be, for example, that managers want to be seen to be successful, especially in an environment where they can be replaced and are answerable to the workforce, and they therefore adopt growth strategies. What is clear is that strong and effective management is possible in a cooperative environment. Those cooperatives which did display significant managerial tendencies, moreover, did not see a need to rotate that management which many (e.g. Williamson, 1980) see as a weakness.

Some may look at these results and see only small differences between them and what we may expect from a sample of small capitalist firms. This in itself is a reflection on large parts of the U.K. cooperative sector. The positive relationship between wanting to work for oneself, the capital stake of members and aspirations towards higher incomes may be seen as a capitalist result by many.

As ever there is a need for further research. But what is increasingly apparent is that the U.K. cooperative sector is a very disperse one. Neither traditional Illyrian theories nor sociological descriptions are able to describe the behaviour of this fast growing movement. There is a

need to examine the constituent parts of the cooperative sector in order to gain a fuller understanding of it.

But on the subject of growth, it cannot be assumed that the cooperative firm will have a slower growth rate than its capitalist counterpart. This research seems to show that cooperatives do want to grow and are not bound by the various conventions and behaviour which have traditionally been put forward as reasons for a slower growth rate. But clearly many cooperatives are willing to sacrifice some degree of growth in favour of the maintenance of other principles, particularly where the cooperative has been established to produce a particular product or range of products. For example there may be reason to believe that the provision of a particular product in some circumstances may be more important than seeking a growth in turnover.

Generally, the particular type of cooperative which is likely to have the largest probability of high growth aspirations will be one which has some managerial leadership (particularly where turnover and employment is concerned), where members have a large capital stake, where the members want to work for themselves and where it is believed that cooperative organisation has productivity advantages.

The probability of a cooperative with a large number of members growing as fast as a smaller one in terms of employment is probably less. This possible 'employment ceiling' effect implies that we may not cast Illyrian models of the labour – managed firm completely to the wind.

### 5.7 Objectives and political motivation

In this section the above analysis is extended by examining the same cooperatives in terms of their political motivation. Some of the impetus for this analysis comes from the work of Daudi and Sotto (1985) who have been critical of the political motivations of Western cooperatives. Indeed in an attempt to argue that cooperatives are degenerating into capitalist firms, they accuse the cooperative movement of "going towards the very regions that it used to condemn, or, rather were condemned by its ancestor" (p.38). But this section also seeks to establish whether or not there exists distinct groupings amongst U.K. manufacturing cooperatives based broadly on a political/non – political division.

By examining both a subset of cooperatives with clearly defined political motivations and another with other non – political motivations it should be possible to evaluate both the strength of the political movement

towards cooperation and self-management, and the assumed weakness of those with non-political motivations. Correlations between the reasons for the establishment of the cooperative are given on page 31.

There seems to be a number of cooperatives whose objectives revolve around matters of:

- politics,
- equality,
- working for oneself,
- atmosphere, and
- the provision of a particular product.

Based on the stated objectives of the cooperative we found that 39 cooperatives (exactly half of the sample) saw two or more of these factors as being very important. We are therefore able to split the sample into two halves according to these objectives. On the one hand there seems to be those cooperatives interested foremostly in non-financial objectives and objectives not aimed primarily at the provision of employment (the production of a particular product for example). On the other hand there are those who see employment for members, financial viability or profitability as the dominant objectives; objectives which some may consider as not uncommon amongst small

traditional capitalist firms. This commercial orientation does not exclude political motivation of course: cooperatives which are commercially successful can often pursue political motivations in an effective way. But those cooperatives categorised into this second group did not state that a number of political objectives were important. Henceforth we will refer to the first subset of cooperatives as having political motivations and the second as having non – political motivations.

## 5.8 Probit Analysis

Once again, since we might expect there to be different reasons for growth aspirations in terms of turnover, employment and members' incomes we will deal with each one in turn. Variable names are given in brackets.

### 5.8.1 Turnover (TO)

As far as the objectives of the firm are concerned we hypothesised above that those cooperatives who see the provision of a particular product as important (PPRO) will wish to maximise the sales of that product and may therefore seek a high turnover. Similarly if an important objective is seen as working for oneself (YOU) then we may expect the same effect. Following Atkinson (1973) we include the

degree of managerialism (MAN). In addition we expected that those who believe there to be productivity advantages (PROD) will expect higher turnover and that the size of the cooperative (SIZE) in terms of employment may also be important. Thus if we estimate this hypothesised relationship using Probit, but this time distinguishing between our two subsets, we get the following results:

DEPENDENT VARIABLE: TO

DATA SET	NON – POLITICAL MOTIVATIONS			POLITICAL MOTIVATIONS		
OBSERVATIONS	39			39		
VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
CONST	– 0.0357	0.5653	N	0.5475	1.0180	N
PPRO	– 1.2048	0.6887	N	– 0.8660	0.6357	N
YOU	0.3450	0.6848	N	– 1.9460	0.8753	N
K	0.7709	0.3522	Y	0.8619	0.3866	Y
MAN	0.7430	0.4820	N	0.8909	0.4899	N
PROD	0.9408	0.5438	N	1.0467	0.5052	Y
SIZE	0.0024	0.0351	N	– 0.0196	0.0360	N
LOG LIKELIHOOD	– 16.5825			– 18.7938		
AVERAGE LIKELIHOOD	0.6536			0.6176		
CASES CORRECT	30			30		

TABLE 5.11

Given this specification the only coefficients which were significantly different from zero in the full data set were PPRO, K and PROD. Amongst the cooperatives with non-political motivations the only significant variable is K; with K and PROD being significant for the political motivations data set. Leaving out the least significant of the variables in the full data set (MAN is still included because its significance is marginal) an alternative specification yields:

DEPENDENT VARIABLE: TO

DATA SET	NON – POLITICAL MOTIVATIONS			POLITICAL MOTIVATIONS		
OBSERVATIONS	39			39		
VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
K	0.9192	0.3922	Y	0.8019	0.3725	Y
MAN	0.6969	0.2959	Y	0.8411	0.4925	N
PROD	0.8101	0.4606	N	0.9691	0.4003	Y
PPRO	- 0.7102	0.5634	N	- 0.7688	0.5342	N
LOG LIKELIHOOD	- 18.8754			- 20.6552		
AVERAGE LIKELIHOOD	0.6163			0.5888		
CASES CORRECT	32			29		

TABLE 5.12



All coefficients in the full data set were significant at the 95% level. Thus, in general, if a cooperative has a high degree of managerialism, a strong capital stake on the part of members and believes there to be productivity advantages associated with cooperative organisation it is more likely to be optimistic in its growth aspirations regarding turnover.

Amongst cooperatives with non – political motivations PROD and PPRO are not significant. Thus there would seem to be less optimism about the role of productivity advantages in this subset. In addition the production of a particular product is less important. This is perhaps not surprising since this variable was one chosen to distinguish politically motivated firms (although another issue is discussed below).

Amongst the cooperatives defined as having political motivations it is the degree of managerialism which seems relatively unimportant. This we might have anticipated given that a likely characteristic of a cooperative with political motivations (by definition) is a degree of equality.

PPRO is also insignificant for both data sets. This is probably best explained in terms of the data. With the fuller data set of 78

observations the variance of PPRO and therefore the amount of information provided is greater. When we reduce the observations by fifty percent clearly there is less information on which the probit model can parameterise. This is something which implies that we must be quite careful about interpreting the results of each subset. At best an indication of relative importances are given. What is pleasing though is that the signs on the coefficients are consistent. What is clearly confirmed in table 5.12 though is the importance of the capital stake variable, the existence of a managerial structure for cooperatives with non – political motivations and the belief that there are productivity benefits in the cooperative form of organisation for those with political motivations.

#### 5.8.2 Employment (EMP)

Looking at the objectives of the firm, our basic hypothesis was that firms who value a good atmosphere (ATM) and equality (EQU) amongst the workforce will not be keen to increase the size of the workforce. But on the other hand managers may be keen on this since it increases their own prestige. We also expected that where there is a high capital stake in the company workers will not want employment increasing policies for fear of it diluting membership surplus. Alternatively some cooperatives may wish to expand membership

because of their commitment to equality. For example, women only or ethnic minority cooperatives may see this as a way of consolidating their objectives. Including our productivity variable and the size of the cooperative our estimation of the two subsets is as follows:

DEPENDENT VARIABLE: EMP

DATA SET		NON – POLITICAL MOTIVATIONS			POLITICAL MOTIVATIONS		
OBSERVATIONS		39			39		
VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT	COEFFICIENT	STANDARD ERROR	SIGNIFICANT	
CONST	– 1.4813	0.8162	N	0.6810	1.2386	N	
ATM	0.7405	0.9388	N	– 2.0490	1.5588	N	
EQU	0.6873	0.9715	N	0.9806	0.9706	N	
MAN	1.1746	0.5715	Y	0.9035	0.4301	Y	
K	1.4368	0.9367	N	0.2664	0.6853	N	
PROD	0.7049	0.4835	N	1.0652	0.4883	Y	
SIZE	– 0.0808	0.0492	N	– 0.0037	0.0168	N	
LOG LIKELIHOOD		– 18.1374			– 20.2626		
AVERAGE LIKELIHOOD		0.6281			0.5948		
CASES CORRECT 27		31					

TABLE 5.13

In the full model (table 5.7 above) the variables ATM and EQU were insignificant and had the wrong expected sign. K and the constant also insignificant. SIZE was insignificant but its negative sign was expected from an Illyrian specification and left in the model. The coefficients on MAN and PROD were significant for the full data set and the subset corresponding to cooperatives with political motivations but PROD is once again insignificant amongst the subset with non – political motivations.

In terms of the two subsets, data restrictions clearly lead to rather less significant results. Amongst cooperatives with non – political motivations only the variable relating to management structure is significant. Amongst those with political motivations MAN remains significant in terms of employment growth, even though it dropped out when the dependent variable was turnover growth. In addition the productivity variable is significant.

A respecification of the model based on the results of the full data set yields the following results:

DEPENDENT VARIABLE: EMP

DATA SET	NON – POLITICAL MOTIVATIONS			POLITICAL MOTIVATIONS		
OBSERVATIONS	39			39		
VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
MAN	1.2808	0.5839	Y	0.9165	0.4220	Y
PROD	0.4634	0.4247	N	0.8021	0.3727	Y
SIZE	– 0.0898	0.0496	Y	– 0.0164	0.0226	N
LOG LIKELIHOOD	– 22.1181			– 21.6036		
AVERAGE LIKELIHOOD	0.5671			0.5747		
CASES CORRECT	26			27		

TABLE 5.14

All the coefficients were significant for the full data set. Interesting was the continued importance of managerialism and of productivity beliefs. The negative, significant sign on SIZE indicated that as the membership gets to larger levels the tendency to increase membership is further

reduced implying a tendency for cooperatives to limit their size.

PROD is confirmed as being insignificant however in the non – political motivations data set, but the other variables remain significant and the sign on SIZE remains negative. For cooperatives with political motivations the tendency for cooperatives to limit their size seems to disappear since the SIZE variable is now insignificant. Although when dealing with such small firms it might be the case that this tendency has simply not yet emerged. The coefficients on MAN and PROD for cooperatives with political motivations are significant.

It should be noted however, that in the case of both PROD and SIZE whilst one coefficient is significantly different to zero and the other not, in neither case are these coefficients significantly different from each other.

Thus the Illyrian analysis arguing that the growth rate amongst cooperatives is likely to be low in terms of employment is still given some limited support, since as firm size increases there is less of a tendency for employment to increase, but still there seems little evidence that workers will actively seek to restrict employment for reasons of self – interest, particularly if they have strong political motivations. The continued support of a management structure in

terms of employment growth in both subsets seems to be a particularly interesting characteristic.

### 5.8.3 Incomes of Workers (INC)

To the cooperative member the opportunity to reap the full rewards of the enterprise surplus rather than see it syphoned off by the owners of capital was hypothesised as important. Thus we expected those who see working for oneself as an important objective of the cooperative to strive for higher income. Those with high capital stakes may also expect proportionately higher returns and managers may strive for higher incomes for members as a way of maintaining their position. Once again including productivity and size of workforce variables our estimation for the two subsets is as follows:



DEPENDENT VARIABLE: INC

DATA SET	NON – POLITICAL MOTIVATIONS			POLITICAL MOTIVATIONS		
OBSERVATIONS	39			39		
VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
CONST	– 1.4923	0.5887	Y	0.5058	0.8964	N
YOU	1.2092	0.6381	N	– 0.8285	0.8604	N
K	2.1701	0.9385	Y	0.6040	0.6088	N
MAN	– 0.4951	0.8280	N	– 0.2213	0.4929	N
PROD	0.8857	0.4830	N	0.4894	0.4719	N
SIZE	0.0075	0.0063	N	– 0.0170	0.0173	N
LOG LIKELIHOOD	– 18.5736			– 18.5665		
AVERAGE LIKELIHOOD	0.6211			0.6212		
CASES CORRECT	29			27		

TABLE 5.15

MAN and SIZE were insignificant in the full data set and YOU, K, PROD and the constant were significant. In the subset pertaining to cooperatives with non – political objectives the importance of working for oneself is diminished as is (once again) the perception that productivity advantages are important. In the other subset however all variables turn out to be insignificant, implying that there seems to be no systematic relationship between the hypothesised variables for cooperatives with political motivations.

Re – estimation of the model in line with the results of the full data set yields:

DEPENDENT VARIABLE: INC

DATA SET	NON – POLITICAL MOTIVATIONS			POLITICAL MOTIVATIONS		
OBSERVATIONS	39			39		
VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
CONST	- 1.3631	0.4926	Y	- 0.5576	0.6931	N
YOU	0.9877	0.6063	N	0.4011	0.4078	N
K	2.0718	0.8983	Y	0.6921	0.6845	N
PROD	0.7663	0.4639	N	0.5457	0.4655	N
LOG LIKELIHOOD	- 20.0713			- 19.5834		
AVERAGE LIKELIHOOD	0.5977			0.6052		
CASES CORRECT	25			29		

TABLE 5.16

In the full data set the constant remained highly significant and negative indicating that expectations of significant increases in incomes in the cooperative sector are generally low. This continues to be the case in the non – political motivations subset. But working for oneself and productivity perceptions become insignificant.

For the politically motivated subset of cooperatives all coefficients are insignificant. This must be in part due to our data restrictions. However, the degree of significance may be further underestimated since the YOU variable is one which is defined as being related to political motivations and implicitly appears on both sides of the equation for the political motivations subset, thus leading to some multicollinearity and thus unreliable standard errors. In fact, this tendency will occur anywhere where an objective of the cooperative has been used as an explanatory variable.

#### 5.8.4 Model Estimation Using Dummy Variables

The data restrictions discussed above means that information may therefore be missing in the type of specification used. In addition to this using a 'split sample' estimation process implies a reduction in the size of each data set leading to a reduction in the variance and therefore the explanatory power of the model. In order to build up a more comprehensive picture, supplementary information can be built up if the full model is re-estimated using a dummy variable (DUM) in place of the 'objectives' variables on the right-hand-side of the equation rather than splitting the dataset into two discrete parts. However, use of a simple dummy variable method does constrain the coefficients to be the same for the two types of cooperative and therefore interaction terms are used in a reestimation of the models in section 5.8.5.

In addition to this examination of the significance and size of the dummy variable itself can provide information about whether cooperatives with political motivations, for example, *have different* behavioural tendencies overall, to those without political motivations. Allocating unity to cooperatives with political motivations and a zero otherwise estimation of the six basic models above yields the following results:

---

DEPENDENT VARIABLES: TO  
OBSERVATIONS: 78

---

VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
CONSTANT	- 1.2000	0.3573	N
K	0.8582	0.3311	Y
MAN	0.6535	0.4110	N
PROD	0.9259	0.3420	Y
SIZE	0.0065	0.0376	N
DUM	- 0.1785	0.3527	N

---

LOG LIKELIHOOD: - 39.2230  
AVERAGE LIKELIHOOD: 0.6048  
CASES CORRECT: 58

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TABLE 5.17

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DEPENDENT VARIABLES: TO  
OBSERVATIONS: 78

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VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
K	0.7460	0.3487	Y
MAN	0.8178	0.3381	Y
PROD	0.8516	0.3154	Y
DUM	- 0.2612	0.4182	N

---

LOG LIKELIHOOD: - 39.3859  
AVERAGE LIKELIHOOD: 0.6035  
CASES CORRECT: 61

---

TABLE 5.18

The use of the dummy variable does not greatly affect the turnover model and the dummy itself is insignificant indicating little behavioural difference between the subsets. The continued importance of MAN, K and PROD is confirmed. However, its negative sign, implying that politically motivated cooperatives may have a lower probability of being a high turnover growth enterprise, may add some weight at least to a belief that there is a trade off between political objectives and other business objectives. This was clearly stated by some respondents in the original questionnaire.

DEPENDENT VARIABLES: EMP  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
CONSTANT	- 0.8876	0.4090	N
MAN	1.2582	0.5626	Y
K	0.7291	0.5668	N
PROD	0.8677	0.3224	Y
SIZE	- 0.0300	0.0112	Y
DUM	0.7792	0.3467	Y
LOG LIKELIHOOD: - 42.0929			
AVERAGE LIKELIHOOD: 0.5830			
CASES CORRECT: 56			

TABLE 5.19

DEPENDENT VARIABLES: EMP  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
MAN	0.7959	0.3085	Y
PROD	0.5651	0.2859	Y
SIZE	- 0.0462	0.0208	Y
DUM	0.5307	0.2618	Y
LOG LIKELIHOOD: - 46.0301			
AVERAGE LIKELIHOOD: 0.5543			
CASES CORRECT 51			

TABLE 5.20



MAN, PROD and SIZE are confirmed as being significant. With regard to employment the dummy variable yields a more interesting result. In the full model and in the reduced specification the dummy is positive and strongly significant and does add to the explanatory power of the model. This result suggests that cooperatives who are politically motivated are likely to be far more optimistic about employment growth than their 'non – political' counterparts. The improved specification still yields a negative sign on the SIZE variable however, suggesting a possible limit to this growth aspiration.

---

DEPENDENT VARIABLES: INC  
OBSERVATIONS: 78

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VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
CONSTANT	- 0.7368	0.3646	Y
K	1.3679	0.5322	Y
MAN	0.0322	0.4935	N
PROD	0.6800	0.3201	Y
SIZE	0.0019	0.0032	N
DUM	0.6500	0.3815	N

---

LOG LIKELIHOOD: - 42.0218  
AVERAGE LIKELIHOOD: 0.5835  
CASES CORRECT: 57

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TABLE 5.21

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DEPENDENT VARIABLES: INC  
OBSERVATIONS: 78

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VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
CONSTANT	- 0.6953	0.3062	Y
K	1.3628	0.5300	Y
PROD	0.6547	0.3161	Y
DUM	0.6395	0.3805	N

---

LOG LIKELIHOOD: - 42.2180  
AVERAGE LIKELIHOOD: 0.5820  
CASES CORRECT: 56

---

TABLE 5.22

The income model recovers much of its explanatory power with the dummy variable specification, although the dummy itself is insignificant. The insignificance of DUM suggests that there is no significant difference between the subsets on matters of income. This also confirms the view that the simple models represented here are not fully capable of explaining the income aspirations of politically motivated cooperatives.

Use of the dummy variable approach has provided us with some supplementary information, particularly with regard to employment growth. However, constraining the explanatory coefficients to be the same in this approach has meant that it is not possible, in terms of turnover and income aspirations, to determine whether the behaviour of the politically motivated cooperatives is "on the whole" different from that of its non – political counterpart. In effect this approach views political motivations as having a fixed effect rather than influencing the coefficients on the other explanatory variables.

### 5.8.5 Interaction Dummies

We should also recognise that, in addition to a possible difference in the intercept parameter, some of the slope parameters may change as well. We may therefore reestimate our models including interaction dummies, again using a 1 to indicate a cooperative with political motivations. The models estimated in tables 5.18, 5.20 and 5.22 are reestimated below.

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DEPENDENT VARIABLES: TO  
OBSERVATIONS: 78

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VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
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K	0.5310	0.2011	Y
DUM <sub>K</sub>	-0.0098	0.0107	N
MAN	0.7788	0.3182	Y
DUM <sub>MAN</sub>	0.0027	0.0053	N
PROD	0.6529	0.2314	Y
DUM <sub>PROD</sub>	0.0092	0.0141	N
DUM	-0.1912	0.3413	N

---

LOG LIKELIHOOD:	- 39.5781
AVERAGE LIKELIHOOD:	0.6003
CASES CORRECT:	60

---

TABLE 5.23

None of the dummies are significant in the turnover model indicating no difference between the two subsets. This confirms the more simple result in table 5.18 and of the split sample in table 5.14 where none of the coefficients between the two samples were significantly different from each other. Looking now at employment:

DEPENDENT VARIABLES: EMP

OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
MAN	0.9898	0.4140	Y
DUM <sub>MAN</sub>	-0.1040	0.0326	Y
PROD	0.6357	0.2497	Y
DUM <sub>PROD</sub>	0.0212	0.0094	Y
SIZE	-0.0329	0.0121	Y
DUM <sub>SIZE</sub>	-0.0329	0.0121	Y
DUM	0.4537	0.1984	Y
LOG LIKELIHOOD:		-45.3371	
AVERAGE LIKELIHOOD:		0.5243	
CASES CORRECT			50

TABLE 5.24

For firms with political objectives the existence of management is still important, although the slope dummy is negative mitigating this somewhat as firm size increases. The tendency to limit the size of the

cooperative in terms of employment seems less in the politically motivated cooperative (again there is a negative sign on the dummy) whilst the belief in productivity advantages associated with cooperative production continues to be important.

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DEPENDENT VARIABLES: INC			
OBSERVATIONS: 78			

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VARIABLE	COEFFICIENT	STANDARD ERROR	SIGNIFICANT
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CNST	-0.9821	0.3401	Y
K	1.3081	0.5101	Y
DUM <sub>K</sub>	-0.0260	0.0091	Y
PROD	0.6201	0.2961	Y
DUM <sub>PROD</sub>	0.0039	0.2961	N
DUM	0.5501	0.4120	N

---

LOG LIKELIHOOD:	-42.0201
AVERAGE LIKELIHOOD:	0.5820
CASES CORRECT:	54

---

TABLE 5.25

Looking at income growth aspirations the shift dummy remains insignificant. Nevertheless the interaction term on K is significant and negative. This implies that the politically motivated enterprise is less inclined to see a high capital stake on the part of members as important in its growth aspirations as its non-political counterpart.

## 5.9 Discussion

It must be stressed again that the models presented above are subjective and the a priori reasoning is open to some debate. In addition, splitting our sample in two has lead to information being lost and because of restricted variances more variables have become insignificant. Much of this lost information has been regained though with a dummy variable specification. Nevertheless some common conceptions about cooperative firms, particularly with regard to their objectives and political motivations, have been tested.

We have suggested in previous chapters that a common criticism of the cooperative movement is that it does not adhere to traditional "cooperative" political principles (e.g. egalitarianism, democracy, income sharing and social responsibility). Thus, by examining the growth aspirations of a clearly defined subset of politically motivated cooperatives, to some extent we have been able to examine the significance of this claim to the movement as a whole.

Overall one characteristic which seems important in the generation of growth aspirations is the importance of a managerial structure. This seems to lend weight to the Atkinson model. With regard to

employment, a management structure tends to lead to a higher probability of growth aspirations in both subsets of cooperative examined. But with regard to turnover, managerialism seems less important to cooperatives with political motivations.

The issue of whether productivity advantages associated with cooperative production lead to higher growth aspirations is perhaps the area of clearest difference between the two subsets. In growth aspirations relating to turnover, employment and income the perception of productivity enhancement is not important for cooperatives with non-political motivations, yet in relation to turnover and employment it is important to those with political motivations.

It is often claimed that the labour-managed firm will be restrictive in terms of employment growth (see for example, Atkinson, 1973 and Bonin, 1983). Results reported here do not confirm that. Although there is some evidence of a limit to employment growth for cooperatives with non-political objectives, this is much weaker for those with political objectives. One assumes that this latter group who overall seem less deterministic with regard to incomes may well be more committed to planned employment growth. Alternatively there may simply be more optimism about employment growth in politically-motivated cooperatives. This does conflict with the view that workers



will not want employment increasing policies for fear of them diluting membership surplus unless, as has been implied, politically – motivated cooperatives are less interested in income growth.

The research reported here does not add weight to the Daudi and Sotto predictions of degeneration of the cooperative sector. For non – politically motivated cooperatives we may point to only small differences between their objectives and behaviour when compared to traditional capitalist firms. Although one must recognise that this has not been directly tested here and does suggest an area for future research. For cooperatives with political motivations we find much more commitment not only to a political movement but also to the use of cooperative organisation to promote productivity, internal growth aspirations and less of a reliance on managerial leadership.

### 5.10 Actual Growth Rates

In the second survey of cooperatives, respondents were asked about their actual growth rates over the previous twelve months, using exactly the same criteria by which they had been asked about anticipated growth rates. Out of 44 responses in total we have full data which can be compared with original responses in 40 cases. In the first instance though it is useful to examine straightforward responses.

#### GROWTH RATES OVER A TWELVE MONTH PERIOD:

<u>Turnover</u>	Decline	No growth	Increase ( < 10%)	Increase ( > 10%)
Anticipated	0	1	3	16
Actual	0	1	7	12

<u>Employment</u>	Decline	No growth	Increase ( < 10%)	Increase ( > 10%)
Anticipated	0	3	10	7
Actual	3	5	6	6

<u>Income</u>	Decline	No growth	Increase ( < 10%)	Increase ( > 10%)
Anticipated	0	3	10	7
Actual	0	7	7	6

TABLE 5.23

There is clearly some over – anticipation of growth over the twelve month period, but this does hide some under – anticipation in a few cases which can be seen from the following table:

ACTUAL GROWTH RATES COMPARED WITH  
ANTICIPATED GROWTH RATES

	Under anticipation	Accurate anticipation	Over anticipation
<u>Turnover</u>	2	13	5
<u>Employment</u>	3	9	8
<u>Income</u>	4	9	7

TABLE 5.24

Whilst rather more enterprises are over – anticipating their growth rates than under – anticipating them, there is a large number of cooperatives whose expectations (and perhaps plans) are largely accurate. Not surprisingly the largest overestimation comes with regard to employment. But unlike the other two cases it is here that a more

formal decision has to be made about growth. Turnover and incomes grow if business is good, but employment only grows when members of the cooperative decide to let a new person into the organisation. We have already discussed a multitude of reasons why it may not be in the interest of the cooperative to expand its membership. Thus we may have some limited evidence to suggest that whilst cooperatives may want to expand their membership, the actual process of finding somebody suitable, of taking a risk introducing a new member and a multitude of other factors may prevent this from happening. On the other hand we must not ignore the three cooperatives who increased employment although they had not planned to do so.

We are now able to check our basic probit models examining growth aspirations, against actual growth rates in order to see if the determinants of expectations are equivalent to the determinants of actual growth rates. Tables 5.26, 5.27 and 5.28 reestimate the models based on actual growth rates for turnover, employment and incomes respectively.

DEPENDENT VARIABLE: TO  
OBSERVATIONS: 40

VARIABLE	COEFFICIENT	STANDARD ERROR
PPRO	– 0.3330	0.3097
K	0.3217	0.3213
MAN	0.3722	0.1279
PROD	0.6226	0.2814
LOG LIKELIHOOD	– 27.2162	
AVERAGE LIKELIHOOD	0.5604	
CASES CORRECT	30	

TABLE 5.26

DEPENDENT VARIABLE: EMP  
OBSERVATIONS: 40

VARIABLE	COEFFICIENT	STANDARD ERROR
MAN	0.4038	0.4112
PROD	0.5022	0.4268
SIZE	– 0.1047	0.1855
LOG LIKELIHOOD		– 23.9773
AVERAGE LIKELIHOOD		0.5075
CASES CORRECT		27

TABLE 5.27

DEPENDENT VARIABLE: INC  
OBSERVATIONS: 40

VARIABLE	COEFFICIENT	STANDARD ERROR
CONSTANT	– 0.5549	0.4421
YOU	0.1991	0.3319
K	0.5895	0.4619
PROD	0.6250	0.3178
LOG LIKELIHOOD		– 24.4045
AVERAGE LIKELIHOOD		0.5172
CASES CORRECT		26

TABLE 5.28

The only coefficients which remain significant are the MAN (the existence of a managerial structure) and PROD (the belief that there are productivity advantages associated with the cooperative organisation) variables with respect to turnover growth. This confirms the idea that the existence of a management structure is conducive to growth for a range of reasons outlined elsewhere and that turnover growth is in part due to optimism about the cooperative having productivity advantages. This may provide some confirmation that cooperatives do indeed have productivity advantages; the positive coefficient indicated that where these are perceived (assuming the perceptions are correct) growth is indeed higher than otherwise.

None of the coefficients with respect to employment growth or income growth are significant. Thus it might be suggested that actual growth rates are rather more random than growth aspirations. This might be expected since cooperatives are working in environments which are uncertain and aspirations may not be fulfilled because of a number of exogenous reasons. With full information and certainty we might hypothesise that actual growth rates may more fully mirror aspirations. But we have already indicated, when looking at political sub-divisions, that the strength of any relationship in the area of income was quite weak. But overall we must also remember that the number of observations has fallen from 78 to 40 and that detectable variance within the data, which the probit analysis can pick up, is obviously less. Our lack of significance may be as much due to the lack of data therefore.

#### 5.11 Issues of exogeneity

We have assumed that all the variables on the right hand side of our estimated equations are exogenous. It should be clear that variables relating to the objectives of the cooperative, such as wanting to work for oneself or the importance of a particular product, will be related to each other. Indeed we have used these relationships in order to partition the dataset into politically motivated cooperatives and others.

But in general these variables have not been as important as one might have initially expected. Indeed where any variable relating to the objectives of the cooperative is important and significant in an estimated equation, it never appears with another such variable. Hence in this case there is no problem of multicollinearity.

However, as noted in section 5.9 two variables which do seem to be important indicators of growth aspirations (and indeed actual growth patterns as observed in section 5.10) are the existence of a managerial structure (MAN) and the belief that there are productivity advantages associated with cooperative production (PROD).

In a dataset of this kind explanatory variables are almost bound to be related and interlinked because they are based on a common set of values and attitudes. In effect we face problems similar to those encountered by researchers using time-series data, in that observations will almost certainly reflect a degree of multicollinearity. The effect of this is well documented, but briefly it is to increase the size of variances for estimators and therefore to drop variables from the analysis which may be important. The more severe the multicollinearity problem, the larger will be these variances. However, as Judge *et al.* (1988) point out multicollinearity will not be a major problem as long as it is not too severe and as long as one does not place too much



emphasis on the exact magnitude of the estimated coefficients. As stressed in chapter 2 the stance taken throughout the thesis is to place emphasis on positive or negative significant relationships rather than trying to explain the magnitude of coefficients or turning them into exact probabilities.

It remains however, to discover the nature of any multicollinearity and indeed, perhaps more interestingly, to discover and relationship between management structure, productivity beliefs and other assumed exogenous variables.

#### 5.11.1 Management Structure

We have seen that management structure is important in the growth of the cooperative firm. We may now be interested in the characteristics of cooperatives which choose to adopt a management structure. The definition of management structure is given in table 2.4 above. We have three possible states (managers making policy decisions, managers making only day – to – day decisions and no management) and therefore a multinomial probit has to be employed. Regressing MAN against the other significant exogenous variables used in the estimation above yields the following results:

DEPENDENT VARIABLE: MAN  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
CONSTANT	0.0030	0.0146
PPRO	0.2477	0.5689
YOU	0.0355	0.1137
K	0.3455	0.3571
PROD	0.4801	0.2565
SIZE	0.6222	0.2491
LOG LIKELIHOOD	– 31.4523	
CASES CORRECT	41	

Table 5.29

The only variable which is significant at a 95% level is SIZE. In other words a managerial structure is more likely in a larger cooperative (this theme is further developed and confirmed with more descriptive statistics in chapter 6). However, the significance of PROD is marginal. A re – estimation of the model gives:

filled out the original questionnaire and they were perhaps "bullish" about productivity in their enterprise.

#### 5.11.2 Productivity Advantages Associated with Cooperative Production

Similarly PROD itself may not be a completely exogenous variable. If we examine the determinants of a belief in productivity advantages by use of an equivalent "dual" estimation to that in table 5.29 we find:

DEPENDENT VARIABLE: PROD		
OBSERVATIONS: 78		
VARIABLE	COEFFICIENT	STANDARD ERROR
CONSTANT	0.0135	0.0200
PPRO	0.2767	0.2557
YOU	0.1635	0.1773
K	0.2315	0.2971
MAN	0.1482	0.0565
SIZE	0.2416	0.4441
LOG LIKELIHOOD	- 34.9831	
CASES CORRECT	42	

Table 5.31

DEPENDENT VARIABLE: MAN  
OBSERVATIONS: 78

VARIABLE	COEFFICIENT	STANDARD ERROR
PROD	0.5841	0.2664
SIZE	0.6982	0.2641
LOG LIKELIHOOD	- 30.2423	
CASES CORRECT	40	

Table 5.30

SIZE remains significant and PROD (the belief that there are productivity advantages associated with cooperative production) is now significant. This is typical of a multicollinearity situation: estimators are quite sensitive to the addition or deletion of insignificant variables.

In itself though, the positive relationship between the degree of management and the belief that there are productivity advantages associated with cooperative production is interesting. One might assume (from earlier chapters for example) that it was egalitarianism and cooperation which caused there to be productivity advantages, but this result emphasises the role of management. Clearly, this chapter has revealed an importance of management which has hitherto only been suggested. But a very important consideration is that where management in a cooperative existed, it was probably the manager who

The only significant variable is MAN which we might have expected from the estimated equations above. In other words MAN and PROD are interlinked. Reducing the estimation to this significant variable alone gives us:

DEPENDENT VARIABLE: PROD		
OBSERVATIONS: 78		
VARIABLE	COEFFICIENT	STANDARD ERROR
MAN	0.2212	0.0954
LOG LIKELIHOOD	- 29.7731	
CASES CORRECT	39	

Table 5.32

Clearly there is a relationship between PROD and MAN and we have also seen that MAN and SIZE are linked (confirmed in chapter 6). It seems that as the size of the cooperative increases so does the likelihood of the existence of a management structure and this in turn increases "bullishness" about productivity advantages. But there is therefore some evidence of multicollinearity between these variables. However there is little sign of a very close relationship between them and the capital stake structure of the cooperative or the variables relating to the objectives of the enterprise.

The conclusion has to be that whilst we can detect the existence of multicollinearity we should not be too troubled by its existence. It does seem limited in scope and scale and its consequences outlined above would not seem to have too much effect on the general results. At worst we may be excluding variables which are important. But our key relationships, such as the relative importance of management, seem to still be relevant. Since the issue of management itself is further developed in chapter 6 we will not dwell on it here.

#### 5.12 Concluding Remarks

This chapter started out by examining the growth aspirations of cooperatives as a contribution to the literature surrounding the participation – performance nexus. It went on to examine the associated behaviour differences between "politically motivated" and "non – politically motivated" cooperatives. Thirdly actual growth rates of a subset of cooperatives were examined and compared with growth aspirations.

We have seen that any suggestion that cooperatives may not want to grow is refuted by the evidence on growth aspirations. As ever there is a clear need for further research but Illyrian theories are unable to

fully describe the behaviour of this sector. This research indicates that cooperatives do want to grow and do not seem to be bound by the various conventions and patterns which have traditionally been put forward as reasons for slow growth. But some cooperatives are willing to sacrifice some degree of growth in favour of the maintenance of other principles, particularly where the cooperative has been established to produce and promote a particular product or range of products.

With respect to political motivations there are clearly some behavioural differences between those with or without the political motivations defined by reference to the cooperatives' stated objectives. For cooperatives with political motivations we find a commitment not only to the common ownership movement but also to the use of cooperative organisation to promote productivity and less of a reliance on managerial leadership. But even in the case of non-politically motivated cooperatives there is little to support the view of Daudi and Sotto (1985) in their pessimistic view of the cooperative sector.

Actual growth rates indicate a healthy cooperative sector, with the majority of cooperatives growing over the twelve month period under analysis. The systematic link between growth and some of the behavioural variables which existed in the case of growth aspirations disappears to some extent in all but the case of turnover. But data

problems and exogenous factors clearly have an important influence here.

In many respects though it is the analysis of growth aspirations rather than actual growth rates which tells us more about the individual motivations and behavioural characteristics of the cooperative enterprise. In particular a few particular characteristics seem important. Surprising perhaps to many is the clear importance of the existence of a managerial structure in the growing cooperative firm which in turn grows in likelihood with the size of the firm.

In general we find that the particular type of cooperative which will have the highest probability of high growth is one where there is some managerial leadership, where members have a substantial capital stake, where members see an importance in working for themselves and where members believe that there are productivity advantages in the cooperative form of organisation.



## **CHAPTER 6**

# **THE DETERMINANTS OF MANAGEMENT STRUCTURE AND DEGENERATION IN THE COOPERATIVE FIRM**

### **6.1 Introduction**

We have already seen that management may play an important role in the growth plans of the cooperative firm. But where management can be categorized as distinct from the remaining membership account must be taken of the role of that sub-group or person and interplay between the various individuals and groups making up the membership. A management group or manager will be the result of its appointment (either a result of the historical development of the firm or an

appointment of a specialist manager) or as a result of management rotating. The characteristics of both scenarios are examined in section 6.2. But we should also recognise that if managers comes to have a dominant influence over other members the direction of the cooperative may change. Common in the literature on the labour – managed firm<sup>1</sup> is the idea that a cooperative firm once it has a management structure will also suffer from a degree of managerialism will tend to degenerate into a traditional capitalist firm<sup>2</sup>. In other words over time managers will come to dominate a cooperative pushing it towards a traditional capitalist structure. The general issue of degeneration is examined in section 6.3. An empirical analysis relating to the determinants of the adoption of a management structure is discussed in section 6.4. Rather a useful tool of analysis in this area has been to examine some cooperatives in depth and some findings are presented as case studies in chapter 8.

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<sup>1</sup> For a fuller review of the literature and some interesting case studies on the subject of degeneration see Cornforth (1988).

<sup>2</sup> There need not necessarily be strong management for the labour – managed firm to degenerate. Other reasons are possible, see for example Cornforth (1988), Ben – Ner (1984), Miyazaki (1984) and Furubotn (1976).

## 6.2 Management and Managerial Discretion

### 6.2.1 The appointment of a specialist manager

The consequences of having specialised management in the capitalist firm are well documented with much of the debate surrounding degrees of managerial discretion (see for example Baumol 1959, Marris 1964 and Williamson 1964). Developments from and empirical tests of these models have provided us with more of an insight into the workings of the capitalist firm (see for example Fama 1980 and Smirlock and Marshall 1983). In the literature on the labour managed firm a number of authors have found evidence of managerialism. Poole (1978), Granick (1975) and Obradovic (1978) in studies of the Yugoslav firm all find that workers have relatively little influence on decisions compared with managers. However that does not necessarily imply that management is pursuing different objectives to workers but in French and Canadian Cooperatives of the early 1970's Bradley (1980) finds that managers did not tend to work within the framework determined by members.

On the theoretical side Atkinson (1973), Law (1977) and Stewart (1987) have analyzed the possible consequences of managerial discretion for

the cooperative firm. Atkinson's growth model has been discussed previously. The approach taken by both Law and Stewart emphasises short run behaviour and specifically adjustments in employment. Stewart in particular finds that managerial discretion can have major implications for short-run behaviour and that discretion is one reason why the traditional relationship between price and employment in the Illyrian firm may be reversed.

An issue important in the analysis of the cooperative sector is the way in which management is selected. Specifically whether management has been elected by the whole membership or workforce or whether management has in some way appointed itself, either as a result of historical development or by assuming a certain role. Purists would certainly question the whole ethos of an organisation calling itself a cooperative in the latter case. Allied to this issue is the question as to whether management can be voted down.

#### 6.2.2 Why appoint a specialist manager ?

A large number of cooperative firms seem to appoint specialist managers. In the survey undertaken here 42 cooperatives out of 78 employed some sort of managerial structure. This therefore seems to

be an important characteristic of some cooperatives which needs to be examined. We have already seen that cooperatives' growth aspirations can be influenced by the existence of management. But we need to consider the motivations for appointing management in the first place. These seem to fall into four broad areas based on essentially organisational aspects.

Firstly, as Williamson (1980) emphasises there are efficiency grounds. We have seen that he claims there are superior outcomes in terms of hierarchy resulting from assignment and contracting tasks. Knight (1921) sees this efficiency in terms of uncertainty where individuals with superior managerial ability are appointed to perform a specialised task. In the capitalist firm economists such as Braverman (1974) and Marglin (1974) have emphasised the role of management less in terms of efficiency and more in terms of the separation of decision making from workers in order to ensure full benefits to the owners.

Secondly management is often taken to be a particular skill which only some people possess. Whilst these skills might be acquired through education it is arguably only a minority of the population who have such organisational skills. These skills we are often told are important to the smooth running of the firm. Thus as long as there appears to be efficiency criteria associated with the perception of a particular

managerial skill we may expect some cooperatives to appoint (or perhaps train) a specialist manager, rather than adopt collective decision-making or rotation. We have seen that there is certainly evidence of this sort of behaviour in the survey of cooperatives used in this thesis.

Thirdly, the argument advanced by Bradley (1980) is that managers are needed to contain and encapsulate information, in other words to prevent information leaking out to competitors. To make information available to workers, it is argued, would run the risk of leakage and may therefore threaten the existence of the firm. However, as Ireland and Law point out (1982), there is no guarantee that restricting information to management will keep it secure since there is nothing to stop managers leaving to work for competing firms.

The fourth argument, linked closely to the scale of production, surrounds the need for coordination. Both the production process and customers need to be organised and this task may be most efficiently done by a single person or group who are able to step back from the internal workings and organisation of the firm. As with the other three arguments the need for a management structure seems to grow with the size of the cooperative.

### 6.2.3 Rotating the Management Role

An alternative to the appointment of a manager is to rotate that role amongst the membership (or those willing to take on the role) such that a person or team serves for a fixed length of time. Williamson (1980) in his analysis of the relative efficiency of the peer group structure actually requires that management must rotate, arguing that this must occur in order to prevent the manager or managers becoming an elite because they have superior knowledge and are thus not answerable to peer group pressures.

The advantages of such an arrangement include the ability to share responsibility whilst retaining the ability to act quickly on day to day matters and also giving all members an opportunity to develop management skills. It also means that the cooperative does not hit a crisis if a single permanent manager decides to leave. But the disadvantages to having rotation of management include an inability to perhaps develop management skills to the full, lack of continuity and having to go through some sort of adjustment process each time there is rotation.

#### 6.2.4 Managerial Utility and Management Discretion

It is probably too simplistic to assume as Stewart (1987) does that managers in LM-firms and in capitalist firms will have similar motivations. (Although he notes that there is no evidence to the contrary.) Those motivations according to Williamson (1963, 1964) being salary, status, prestige, professional excellence and security. Where a difference does exist it is likely to be in terms of income or more psychological rewards in terms of status and prestige. Even in the most egalitarian cooperative, where income differentials are zero, these other rewards are still likely to exist. In Williamson's model the power, status and prestige of the manager is enhanced by an expansion of staff, in addition as Law (1977) points out an increase in staff is a further contributor to utility if it in turn determines managerial salary. Atkinson (1973) suggests that the main constraint faced by the manager of the cooperative firm would be a minimum level of income expected by the workforce.

The extent to which managers are able to increase their utility at the expense of other members is largely based on the members' ability to monitor the manager in the light of full information. If the manager is able to pursue his/her own objectives in an unmonitored way or if he/she is able to withhold information at, for example, full meeting of



the cooperative then managerialism may occur. With perfect monitoring and open access to information managers will be unable to use any discretionary power to their own advantage. But this is likely to be very costly. Specifically, monitoring costs will depend on structural factors (the relationship between managers and workers, the educational level and skills of the workforce and the frequency of members' meetings, for example) and the technology involved (the more complex the technology, the more difficult it may be for workers to decide whether managers are acting optimally).

### 6.3 The Degeneration Thesis

Historically, there has been a great deal of pessimism about the possibility of sustaining genuinely democratic forms of organisation. As far back as 1949, Michels argued that all democratic forms will eventually become dominated by elites and that the democratic form of ownership was therefore unsustainable. Weber (1968) argued that the most efficient form of organisation was a bureaucratic one rather than a democratic one. Historically work on the longer term survival of the democratic cooperative firm has been particularly pessimistic with authors such as Webb (1914), Shirom (1972), Mandel (1975) and Meister (1984) arguing that in order to survive worker cooperatives will

have to adopt the same organisational form and priorities as capitalist businesses in order to survive. This has become known as the degeneration thesis.

Disagreement remains over the underlying determinants and ultimate consequences of the degeneration process with analysts citing the structure of ownership and capital formation (Vanek, 1971), the use of hired labour (Miyazaki, 1984 and Ben – Ner, 1984) and the role of management (Cornforth, 1988) as being responsible. But in all these cases the empirical base underlying such modelling is very thin (see however, work on life – cycles in French cooperatives by Estrin and Jones, 1986).

### 6.3.1 Theories of Degeneration

According to Abrahamsson (1977), Marx saw the spread of bureaucracy as an inevitable outcome of capitalism. Writers in the Marxist tradition have thus identified the causes of degeneration in terms of the external forces of capitalism. Workers cooperatives whilst feasible in the short run were doomed eventually to reflect the capitalist system. Mandel (1975) argues for example;

"Not only is self-management limited to the level of the factory, workshop or assembly line, an illusion from an economic point of view, in that the workers cannot implement decisions against the operations of market laws, but, worse still, the decisions taken by workers became more and more restricted to decisions about profits... There have been many examples of workers' cooperatives that went wrong; there have been some that succeeded – in capitalist term that is ! All they have succeeded in, however, has been to transform themselves into profitable capitalist enterprises, operating in the same way as other capitalist firms."

The main thrust of this type of approach is that cooperative type organisations cannot hope to change the wider forces at work in the capitalist system, but rather will be susceptible to these forces. In particular the need to survive will mean surviving in a competitive environment with the need to be profitable in the same way as capitalist organisations.

Ben – Ner (1984) and Miyazaki (1984) argue that the labour – managed enterprise is unstable and will, over time, degenerate into a non – cooperative form if it does not fail as an economic entity. Crucial in their approach is the existence of external labour markets which provide an incentive for cooperatives to employ non – member labour. After a point it is predicted that a membership elite will develop who will pay themselves higher wages than the non – member labour. As has already been noted though, in the U.K. the employment of non –

member labour is disallowed by most model rules. In the survey undertaken for this thesis non – members were occasionally found to be on probation awaiting full membership but there was no evidence to suggest that others were employed in any other capacity.

In addition, empirical work based on French cooperatives (Estrin and Jones, 1986) where different model rules are common find that there is no evidence of the proportion of the cooperative workforce who are members falling over time. Indeed in older firms this proportion actually tends to rise.

Other theorising in this area stresses the role of property rights. The work of Furubotn (1976) argues that the cooperative form of organisation is grossly inefficient. Because of the excessive risk aversion, minimal work effort and short – sighted decision – making it is argued that the firm will eventually liquidate. But in a number of European countries the number of cooperative surviving long periods of time is large and Pérotin (1986) finds that cooperatives are most at risk from liquidation early in their lives. Moreover, these sorts of predictions do not sit easily alongside the tendencies for cooperatives to grow as observed in chapter 5.

Vanek (1970) argues that cooperative firms will be forced to liquidate because the capital market discriminates against firms which are self-managed, reinforcing a tendency for firms to self-finance leading them to be smaller in size and have a smaller capital-labour ratio than their conventional counterparts. Over time underinvestment takes place and there is an incentive to employ non-member labour. Again though, the evidence supporting this sort of scenario is lacking. Moreover, from the survey we can see from the following table that there is no obvious difficulty in obtaining finance in the usual ways:

Sources of Capital not provided by members	Number of cooperatives reporting this as a source
Grants	20
Unsecured loans	28
Secured loans	42
Other cooperatives	3
Industrial Common Ownership Fund	2

Table 6.1

Almost two-thirds of cooperatives managed to get secured loans but a number also managed to get unsecured loans. Perhaps surprising

is the relatively large number receiving grants. These came mainly from local authority initiatives, the Prince's Trust (in the case of organisations with members under 25 years of age) and charities.

For the purpose of this analysis, we are left with a slightly different argument (although not wholly separate) concerning the role of management in the cooperative firm. Meister (1974, 1984) as a result of his empirical observations of various democratic organisations, argues that degeneration takes place in four stages where central to this process is the role of management. In the first instance the organisation is characterised by high idealism and commitment which enables the firm to operate and sustain itself in the early period. But following this 'honeymoon' period there are likely to be some internal conflicts between those wishing to maintain the initial ideals of the organisation and those more interested in increased economic activity. The need for efficiency will eventually lead to the cooperative appointing administrators or coordinators who in time become managers. The second phase is a period of transition, where if the cooperative survives, it slowly adopts more and more conventional capitalist principles in order to consolidate its success. Again there may be a period of internal conflict between managers and democratic idealists. In the third phase cooperatives lose their radical ideals and an acceptance of the rules of the market takes place. Democracy thus

becomes restricted to a management elite who are able increasingly to follow their own objectives. Thus as the business continues to develop and production is rationalised the gap between management and workers grows. During the final phase workers lose all effective power and control is assumed by managers because of their ability to control information and the development of a superior management expertise.

Both Meister (1974, 1984) and Kirkham (1973) suggest that cooperative development is subject to Michels' (1949) "iron law of oligarchy". Michels suggests that both organisational and psychological factors will lead to the emergence of a dominant elite. At a psychological level it is argued that members see the need for a leader. But that once this leader is in position he/she sees the position as his/her own and acquires skills or withholds information which makes that position a permanent centralising position. The formation of management elites is also necessitated by organisational factors making direct democracy inefficient: large size making communications and the flow of full information difficult; the difficulty of resolving disputed collectively; the degree of technical specialisation which occurs as the cooperative develops which results in experts with consequent power; the difficulties of decision-making in a collective organisation, particularly where those decisions have to be made quickly; and the need for

stable leadership to maintain continuity in the organisation.

Abrahamsson (1977) takes issue with Michels on a number of points however. Firstly, Michels' analysis assumes that direct democracy is the standard against which other forms of organisation are judged. As a result any form of representative democracy is seen as a movement away from an ideal situation towards an oligarchic one. But Michels himself cites many good reasons why a representative democracy can be more efficient in a successful firm. So long as the representatives of workers remain responsible to the workforce periodically and for policy decisions there should not be a problem. Secondly, It is implicitly argued by Michels that once a member becomes a representative or manager he/she will cease to have the same interests as those he/she represents. But in the cooperative sector it would seem more reasonable to expect this not to happen. Cooperatives are on the whole small organisations with particularly strong principles where managers, it is argued are more likely to act in the interests of the whole membership. Thirdly, Michels largely ignores technological, economic and political processes which will also influence the organisation and behaviour of the cooperative firm.

Batstone (1983) has argued that both the work of Michels and Meister is rather pessimistic. He has produced evidence to suggest there



might be processes of regeneration which lead to a resurgence of representative democracy and prevent a process by which management turn the organisation into a capitalist clone.

Management in "simple collectives" and implications for the degeneration thesis has been examined in some detail by Cornforth (1988). He regards the simple collective as an ideal cooperative where the authority for making decisions is in principle the collective of all members. The only structure the organisation has is the meeting of all members where information about the business is shared and where issues and disagreements are discussed. This type of structure seems common amongst small collectives – having memberships of under ten. Cornforth's work has been to appraise the organisation and behaviour of a sample of these firms.

Cornforth indeed finds that there is a tendency over time for people to occupy specialist roles on a more or less permanent basis; there being both internal and external pressures underlying the trend:

"First, as the business becomes more complex, the specialist knowledge required becomes greater and this takes longer to acquire. Second, cooperators may feel, after the first flush of enthusiasm for working in an anti-bureaucratic way, a need for greater continuity and specialisation in order to increase efficiency. Third, financial pressures tend to reduce the time available for training and the willingness to take risks with inexperienced people." (p.5)

As Michels has suggested these changes would appear to provide an increased role for managers and specialists. But Cornforth observes a number of factors which prevent this from happening. Firstly, in small cooperatives specialist jobs are commonly shared or widely dispersed rather than concentrated in the hands of one or two. This means that significant levels of job rotation are still possible. Secondly, members of cooperatives are often aware of the potential problems which could occur as a result of domination by experts and take action to deal with it. For example, management's role is commonly seen as one of presenting various alternative scenarios rather than the one favoured by management. Thus coupled with the fact that cooperatives are small and informal means that members feel able to influence and control policies within the firm. On this last issue Cornforth may still underestimate the power of management. Even if all possible scenarios are presented (and who knows if they are?) management can still (even unconsciously) present them in a way which accords with personal preferences.

In addition there are reasons why simple collective structures can give rise to problems. Problems associated with the transactions costs of information dispersal and, as Michels (1984) notes, the inability to make quick decisions are common responses in cooperatives' responses to

the research undertaken here. Although it might be argued that better decisions are made when all members are involved, the probability of missing worthwhile opportunities increases with time. Freeman (1974) has pointed to problems associated with "structurelessness". Even though some may resist structuralising the workplace, she argues that structure is impossible to avoid. If a formal hierarchy does not emerge then an informal one tends to result instead. Since the informal elite is not explicitly recognised neither is its power and neither does it have to be accountable. Thus a formal arrangement must be preferred. Landry et. al. summarise the problem as follows:

"The position is that informal elites are not accountable to anyone. Because power has no explicit basis there are no straightforward mechanisms for removing their influence. Unless you are part of the influential group it is hard to know who has real power in an organisation run by an informal elite: who you should lobby for what purpose; what are the criteria on which decisions are based; which of the organisations goals should take priority."

In looking at more complex collective structures Cornforth (1988) recognises that less simple structures are required in the organisation. That structure usually being organised around the main areas of responsibility and paths of accountability. But still it is likely that informal structures will exist. But a complex structure is rejected by many cooperatives because of its association with conventional structures found in capitalist counterparts. Where more complex

structures do exist in the cooperative sector they are more often defined by the democratic decisions of members. Moreover, those holding responsible positions are commonly elected and have to be periodically re-elected. Limits are placed on authority to allow for democratic control at other levels of the organisation.

Woolham's (1987) case study of Wholegrain examines a complex structure in terms of degeneration and regeneration. Its diverse business operations coupled with the fact that it is based on two geographically different sites with five departments (shop, warehouse, packing room, bakery and office) means that the development of areas of responsibility is inevitable. The cooperative holds regular democratic departmental meetings and there is an elected management committee with representatives from each department. This deals with financial and other affairs which affects the cooperative as a whole. General meetings of the whole cooperative are held monthly to discuss and vote upon recommendations of the management committee.

In the shop constant staffing changes meant that in the end one person was left with all the administrative tasks and was eventually appointed manager. In the warehouse an informal 'managerial' role was adopted by one of the workers who was the oldest and had the most experience. He became largely responsible for recruitment in the

warehouse. Both of these situations led to conflict with accusations both of bad management and of a lack of cooperation. In addition to this one of the founder members and a member of the management committee was given special responsibility for new business development. Whilst he was very competent he slowly took over more and more areas of decision-making and became less and less responsible to the membership as a whole.

Nevertheless, it is argued that these processes of degeneration are often balanced by processes of regeneration. In the shop for example, a new manager was appointed who was much keener on cooperative decision-making and delegated many of her 'specialist' tasks while increasing the amount of basic shop work she did.

This scenario indicates that in a growing and particularly in a diversifying cooperative, structure and forms of management need to be regularly reviewed from the point of efficiency and democracy. The best structure for a growing cooperative will depend on a range of factors including size and the degree of diversity.

Increased specialisation in the cooperative leads to competence gaps between people and it is this area that responsibility is often assumed and informal structures emerge. The response to this for a democratic

organisation must be to encourage skill development equally in the workforce via job – sharing, job – rotation and training. Moreover, the dependence on a few experts can seriously threaten a cooperative if those experts leave. The problem with the latter is that if expensive, training more than one person can be a drain on resources. Job – sharing and rotation can also reduce competence, continuity and thus efficiency. Thus a fine balancing act is needed.

#### 6.4 Characteristics of cooperatives with a Management Structure

The idealist's egalitarian cooperative will be democratically run with decision – making being done by all the members. But in reality we observe that in many cases day to day running and decision – making may be the responsibility of a members taking the managerial role or of a management group.

Table 2.7 summarised the extent of decision making done by a manager or management team in the sample of cooperatives surveyed for this thesis. As far as day to day decisions are concerned it is common for these to be taken by managers but in all but nine cases policy decisions were taken by all the members. Seven cooperatives did not elect their managers and in two of these cases the managers

decided on policy matters. It is therefore important to analyze the characteristics of cooperatives who adopt some sort of management structure and to examine whether there are systematic reasons for expecting a cooperative to adopt a degree of leadership.

From the discussion above we may expect there to be organisational reasons why a cooperative may adopt a management structure as the cooperative grows. Thus as the size of the cooperative increases in terms of membership we may expect there to be an increased frequency of a manager or management team taking decisions. In addition to this the degeneration thesis leads us to hypothesise that over time there will be a dilution of the cooperative's original objectives. In turn we may expect the firm to adopt more capitalist principles, including the adoption of a management structure, over time. Thus our basic hypothesis must be that the age of the cooperative may also be an important determinant in any management structure. However, size and age may be correlated themselves, with an increased likelihood of a managerial structure in a large and older cooperative.

Vienney (1980) has suggested that participation is more possible and more effective when the ratio of skills to capital needed in the production of a product is in favour of skills and where skilled labour is needed in the production process. Thus where capital intensive

production takes place, without skilled labour, we may expect there to be a managerially based rather than participatory based framework within the cooperative. In other words there may be constraints of scale which are not conducive to cooperative organisation in some sectors. In categorising the cooperatives in the sample into eight sectors, based on the main product produced: clothing, knitwear and footwear; furniture; food and drink; artistic material and graphic art; engineering; electrical, scientific and software; and others, we can test whether there are sectoral differences in the decision to adopt a management structure. In addition to Vienney's arguments we may also consider uncertainty. If because of the need to make faster decisions or have more specialist knowledge in uncertain sectors, some members are able to convince other members of the need for a management structure, we may also have the basis for sectoral differences.

Thus our basic hypothesis is that the existence of a management structure within the cooperative will be related to size (as measured by the number of members), age and sector. Out of the sample of 78 cooperatives we have the full information about 66 of them. Examining simple statistics relating to age and size of the cooperative in an attempt to support our hypothesis (table 6.2) leads us to suggest that the numbers reported are not significantly different for age and



membership within the sub – groups.

All cooperatives (66):

Average age (years): 6.76

Average membership: 9.49

Cooperatives adopting a managerial structure (38):

Average age (years): 7.76

Average membership: 11.34

Cooperatives not adopting a managerial structure (28):

Average age (years): 5.45

Average membership: 7.07

Table 6.2

These differences cannot lend much support to our basic hypothesis above. But out of the 38 cooperatives we may distinguish between those with a managerial structure handling only day to day decision making (30 cooperatives) where longer term policy decisions are taken by all the membership and those where managers and not the whole membership take the longer term decisions (8 cooperatives). Perhaps

surprisingly the average age of this sub-group is less (although not significantly so) even than that of the non-managerial group at 5.12 years, but the average number of members at 13.6 is significantly higher than for all cooperatives. This may lend a little weight to the idea that organisational aspects rather than ones linked to degeneration are rather more important in the decision to adopt a management structure.

Turning now to estimating the fuller model where the existence of a management structure depends on age, membership and sector, we have a situation which is best examined in terms of the characteristics which increase or decrease the probability of either adopting or not adopting a management structure within the cooperative. This is simply estimated using the probit model where on the left hand side of the equation we have a 1 representing the existence of a managerial structure (variable name MANAG) and a 0 otherwise. On the right hand side we have continuous variables to represent age and size and seven dummy variables for the eight sectors (categorised by main product) specified.

Variable names:

AGE	age of the cooperative (years)
SIZE	size of the coop in terms of the number of members
FURNIT	furniture
FOOD	food and drink
ART	artistic material and graphic art
ENG	engineering
ESS	electrical, scientific and software
PLAST	plastics
OTHER	others

Table 6.3 Results of full model estimation:

DEPENDENT VARIABLE: MANAG

OBSERVATIONS 66

<u>VARIABLE</u>	<u>COEFFICIENT</u>	<u>STANDARD ERROR</u>
CONSTANT	- 0.3211	0.4472
AGE	0.0632	0.0371
SIZE	0.0325	0.0141
FURNIT	- 0.1584	0.5012
FOOD	0.2161	0.5271
ART	- 0.1150	0.4516
ENG	0.0945	0.3457
ESS	0.1211	0.3710
PLAST	0.0785	0.3513
OTHER	- 0.2145	0.5329

CASES CORRECT = 53

LOG LIKELIHOOD - 42.3618

AVERAGE LIKELIHOOD 0.6263

Only the SIZE variable is significant with the most insignificant variables being ones relating to sector. Attempts to reduce the number of

dummy variables, by amalgamating the sectoral groupings still result in insignificant coefficients. Thus although based on small samples we have to reject the Vienney type hypothesis. If we reestimate our model excluding our sectoral dummies we find:

DEPENDENT VARIABLE: MANAG

OBSERVATIONS 66

<u>VARIABLE</u>	<u>COEFFICIENT</u>	<u>STANDARD ERROR</u>
CONSTANT	- 0.3267	0.3949
AGE	0.0555	0.0341
SIZE	0.0355	0.0154

CASES CORRECT = 56

LOG LIKELIHOOD - 42.7032

AVERAGE LIKELIHOOD 0.6236

Table 6.4

Again the only variable which is significant is that of SIZE. The constant is the most insignificant variable and excluding it from our estimation gives:

DEPENDENT VARIABLE: MANAG

OBSERVATIONS 66

<u>VARIABLE</u>	<u>COEFFICIENT</u>	<u>STANDARD ERROR</u>
AGE	0.0274	0.0234
SIZE	0.0305	0.0127

CASES CORRECT = 48

LOG LIKELIHOOD - 43.3578

AVERAGE LIKELIHOOD 0.6186

Table 6.5

Still, our AGE coefficient fails to be significant whilst the SIZE coefficient remains so. However the number of cases correct falls to 48 such that the overall model specification is poorer.

Life – cycle patterns of LM – firm behaviour (Miyazaki, 1984, Estrin and Jones, 1986) suggest that AGE might enter the formulation as a quadratic. But we can see from table 6.6 that this also fails to be significant.

DEPENDENT VARIABLE: MANAG

OBSERVATIONS 66

<u>VARIABLE</u>	<u>COEFFICIENT</u>	<u>STANDARD ERROR</u>
AGE	0.0111	0.0140
AGE <sup>2</sup>	0.0029	0.0127
SIZE	0.0249	0.0120

CASES CORRECT = 50

LOG LIKELIHOOD - 42.9411

AVERAGE LIKELIHOOD 0.6201

Table 6.6

Examining only the relationship between the existence of managerialism and the size of the firms confirms the significance of SIZE.

DEPENDENT VARIABLE: MANAG

OBSERVATIONS 66

<u>VARIABLE</u>	<u>COEFFICIENT</u>	<u>STANDARD ERROR</u>
SIZE	0.0391	0.0132

CASES CORRECT = 48

LOG LIKELIHOOD - 44.0213

AVERAGE LIKELIHOOD 0.6132

Table 6.7

One problem with the estimation above is that we might expect the age and size of cooperatives to be correlated with the size of the cooperative growing over time, thus introducing multicollinearity into the model. The consequence of this being that standard errors are no longer accurate. In order to be sure that the AGE is insignificant we must therefore test for any multicollinearity. Examining the relationship between AGE and SIZE using O.L.S. gives us the following results:



DEPENDENT VARIABLE: SIZE

OBSERVATIONS 66

DEGREES OF FREEDOM 64

<u>VARIABLE</u>	<u>COEFFICIENT</u>	<u>STANDARD ERROR</u>	<u>T - VALUE</u>
CONSTANT	7.2831	2.4144	3.0165
AGE	0.3429	0.2872	1.1936

R - SQUARED = 0.0217

Table 6.8

The AGE coefficient is insignificant. Thus we cannot assume that cooperatives increase their membership over time necessarily and we can reject any assumption of multicollinearity.

The consequence is that the only variable which has a direct and significant impact on the probability that a cooperative will adopt a management structure is the size of the cooperative. This tends to support an argument that the most important reason why a cooperative will adopt a managerial structure is associated with its size and therefore organisational attributes. The insignificance of the age

coefficient does lend support to a view that the cooperative will degenerate over time by moving into a management structure which eventually becomes managerialist and capitalist.

## 6.5 CONCLUDING REMARKS

A degree of management can be important to the cooperative firm, if it is able to be monitored by members of that firm. This chapter has looked briefly at two reasons for the existence of a managerial structure. Firstly, we hypothesised that management was important when the size of the cooperative increased because of organisational and information related reasons. Secondly, the literature on degeneration may lead us to believe that managerial structure would become more formal over time as the cooperative moved further away from its original ideals.

The first proposition is clearly supported from the evidence presented, although it is not entirely clear whether it is the large cooperative which adopts a managerial structure or whether the adoption of a management structure leads to managers pursuing their own objectives, one of which may be to increase the membership of the cooperative.

The second proposition is more questionable. Although there is some evidence to support the view that on average cooperatives with a management structure are older than those without a management structure, when examining age of the cooperative in the context of the probability of a cooperative adopting a management structure there seems to be no systematic link. This in turn must lead us to question the degeneration thesis. Although we must remember that the bulk of the cooperative sector in the U.K. (and in this survey) are young firms and one might hypothesise that it is too early to be sure of this finding.

Essentially the degeneration thesis is based on a view of a Utopian cooperative, with any movement away from that seen as being degenerative. This seems to be a particularly dogmatic view. Certainly there seems little evidence to suggest that over time the cooperative will necessarily tend to take on a capitalist structure. The evidence may on the other hand support the more pragmatic story of degeneration and regeneration (we return to this issue in chapter 8). That is not to say that no cooperative will ever degenerate or that many cooperatives with a management structure may not suffer from a degree of managerialism. It does suggest that simple theories of degeneration are not capable of explaining much of what we observe in a dynamic cooperative sector.

## **CHAPTER 7**

# **THE EXTERNAL ENVIRONMENT AND THE NOTION OF SELF – EXPLOITATION**

### 7.1 Introduction

Any analysis of the U.K. cooperative sector would be lacking without a consideration of the external environment in which most cooperatives find themselves, namely one dominated by large capital. The actual position facing many U.K. worker cooperatives is one where they are dominated by large firms. This can manifest itself in competition in the market place or the dominance of outlets by a monopsonistic buyer. In the survey of 78 cooperatives used in the thesis we can clearly distinguish 42% of these enterprises as operating in markets where a

dominant capitalist competitor exists and 27% operating in a market where a dominant buyer exists.

The recent growth of small firms and particularly of cooperatives has been seen as a good thing. Commentators following the arguments of Bolton (1971) and Birch (1979) have pointed to the positive characteristics of small scale enterprise which include harmonious working environments, reduced absenteeism, the provision of competition for large firms, a source of innovation and the creation of new jobs. In addition, the last ten years has seen environmental concerns about large – scale production and a trend away from Fordist production techniques. According to commentators such as Piore and Sabel (1984), Wood (1989) and Imrie (1986) new technologies, changing work practices and more flexible markets and production techniques have led to an increased potential for specialised units.

But Jefferis (1988) suggests that this may not be all good, suggesting that in practice, workers in many small firms experience lower wages, worse working conditions, less trade union representation, and less protection from arbitrary management decisions, than workers in similar jobs in large firms and that it is no coincidence that low paying industries are normally dominated by small firms.

In addition in response to demand uncertainty, many aspects of large firms' operation have been fragmented and taken over by small firms. Thus the responsibility for dealing with fluctuations in demand and output has often been pushed on to small firms and away from their dominant counterparts. Often being underfinanced, small firms can only survive by intensifying the exploitation of labour through paying lower wages.

This chapter recognising that many cooperatives, because of their small size, will be operating in markets characterised by traditional capitalist firms seeks to explore the idea that this dominance will force cooperatives into a position of self-exploitation in order to survive. We start out therefore in section 7.2 by looking at the operation of small cooperatives as fringe firms in the market place. Section 7.3 goes on to explore the notion of self-exploitation, examining specifically the argument that it is dominance by capitalist firms which forces cooperatives into this role. Having built up some clear hypotheses, section 7.4 examines some empirical evidence. Finally some concluding remarks are made.

## 7.2 The Nature of the Fringe Cooperative Enterprise

The debate about the political and economic significance of worker cooperatives in a capitalist economy is ongoing<sup>1</sup>. Treated sceptically by many but seen as the road to self-managed socialism by others, they are nevertheless a growing part of the mixed (albeit capitalist dominated) economy. Their role, largely as small businesses, in the economy must nevertheless be seen in the context of larger conventional firms.

Gunn (1988) notes that:

"In the most general sense self-managed firms can only compete effectively with conventional firms in a market economy to the extent that the monetary value of their greater efficiency and lack of profit compensate for the ability of capitalists' managers in comparable conventional firms to keep wages below what members of the self-managed firms are willing to accept." (p. 10)

Implicitly what this means is that either these self-managed firms must have an absolute cost advantage for some reason, or they will be under continual pressure to reduce the total compensation package and other costs such as the provision of adequate levels of health and safety provision.

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<sup>1</sup> For an excellent overview of this debate see the book by Mellor et. al. (1988).

Technologies associated with production, information and communications have provided many opportunities for reorganising production. With additional opportunities for franchising and sub-contracting, these developments have made smaller-scale, batch production possible. The benefits associated with large scale economies are being replaced by economies of scope as large batch based capital equipment is replaced by more flexible multi-product machinery. We know from the survey that very few cooperatives are operating in markets presently associated with high technology (artisan type cooperatives still dominate) but there may be much potential growth in this area in the future.

In the past, large mass production techniques have relied on mass demand for the product being produced. This meant that production was highly sensitive to changes in aggregate demand and in particular to recession. Now, smaller quantities of much more specialised products can be produced profitably because the technology is available to do it and because markets are growing internationally such that even the most specialised products are likely to have sufficiently stable markets in terms of demand. Clearly a post-1992 Europe can only accelerate this trend. This also means that new smaller firms based on the twin characteristics of flexibility and specialisation are able



to survive alongside their much larger conglomerate counterparts.

But competing under market conditions may carry with it barriers to the development of self-management. Effective implementation of self-management requires the construction of supporting institutions and cultural tendencies that are not predominant in capitalist society. These include the equivalent of schools for teaching management skills, cooperative institutional and legal structures, supportive lending institutions and social values. Competition in the market place tends to foreclose the avenue of development by the individual firm by isolating firms in their own day-to-day fight for survival. Thus Gunn (1988) notes that:

"... workers who begin with a quest for control of their own workplace find themselves controlled by the market, and market forces exert a steady pull to keep these newly created organisations from contributing to further change."  
(p. 12)

Little comparative work has been done on the performance of cooperatives and traditional small firms, but one study by Jackall and Crain (1984) did find that wages in cooperative enterprises were lower than in comparative small firms. The issue for cooperatives revolves around whether they can avoid reproducing the negative aspects of small firms in general and build on positive ones which have been

widely discussed elsewhere (See Estrin, 1985, Ireland and Law, 1982 and Welford 1989a for example). Whilst some would claim that cooperatives are significantly different to traditional small firms, nevertheless the external economic pressures acting on them are alike.

### 7.3 On the Notion of 'Self – exploitation'

Those who are most sceptic about the cooperative movement argue that cooperatives are vehicles for self – exploitation and are illusory in their promise of more self determined workplaces. These criticisms have been expressed lucidly by Mandel (1975):

"It is ... to deceive workers to lead them to believe that they can manage their affairs at the level of the factory. In the present economic system, a whole series of decisions are inevitably taken at higher levels than the factory, and if these decisions are not consciously made by the working class as a whole, then they will be made by other forces in society behind the workers' backs." (p. 38)

Tomlinson (1982) concentrates more on the constraints imposed on the cooperative firm by the need to survive in capitalism:

"Whilst cooperatives operating in a predominantly capitalist economy are hemmed in by, for example, the need to get

finance, or the need to sell their goods at prices which will provide a positive cash flow, they are not so tightly hemmed in as the common Marxist argument suggests. They have to have a concern for financial survival but this does not mean that to successfully achieve this there is only one way, 'the capitalist way'." (p. 35)

Schutt and Whittington (1987) have distinguished between two types of business located in the small firms' sector of the economy. As the vast majority of cooperatives are small we can apply this analysis to the cooperative sector. Small firms will either be 'dependent' or 'independent'. Dependent firms are defined as follows:

"These 'dependent' small firms complement and serve the activities of larger firms, for instance, engaging in sub-contracting. Their economic viability depends upon both the level of activity of their large firm patrons and the 'make or buy' decisions of these large firms." (p.15)

Clearly this type of firm is tied in to its larger partner or partners and without them would have particular difficulty surviving. The independent firm does not necessarily enjoy a more secure position however:

"These 'independent' firms are of two types: manufacturing and service firms that compete with large firms by intense exploitation of labour and (often antiquated) machinery; and manufacturing and service firms that do not compete with larger firms, being confined to 'niches' of demand consisting of small local or specialised markets." (p.15)

According to Mellor et. al. (1988) history suggests that the alternative cooperatives have largely occupied the territory of the small specialised/localised markets ignored by the large firms.

Schutt and Whittington's model is a pessimistic one for small firms and cooperatives interested in security and independence. It is argued that where a firm does operate in a relatively secure market position this is likely to be a temporary phenomenon or attributable to a high level of self-exploitation. Dependent firms are by definition in a precarious market position and are also likely, it is argued, to suffer high levels of self-exploitation as they absorb their overheads.

Webb and Webb (1914) had rather a lot to say about self-exploitation, indeed it was they who first raised this issue with respect to the cooperative sector. In particular they were aware of the problems of dependency:

"... the most numerous class of individual producers are those craftsmen who work 'for the trade' and who are dependent both for buying their raw material and buying or hiring their instruments of production, and also for selling their manufactured products, on wholesale or retail traders." (p. 13)

Thus their concern was with groups of workers who have nothing to

sell but their labour and who choose to do this outside of the established framework of traditional firms. These groups of people are easily exploitable and, it is argued, exploit themselves because:

"... they cannot combine in Trade Unions, whilst the smallness of their enterprise usually exempts them from any effective legal protection in the form of the Factory Acts. Oppressed by the wholesale and retail traders on either side of them, they become in turn potent instruments of oppression of those whom they employ ..."  
(p. 3)

Fairclough (1986) points out that the impact of the competitive market effects all aspects of a cooperative's self-determination. In particular, its position within the external market will affect labour segmentation within the cooperative itself. Even if the cooperative avoids segmentation of its own internal structure, it will find itself in a secondary labour market externally. This weak market position will thus entail compromises on the part of cooperatives even if they have been established in opposition to traditional capitalists' work practices.

With technology as well, it is argued by Mellor et al. (1988) that cooperatives are not free to make unconstrained choices and imposed choices may lead to further self-exploitation. Choice and control of technology is expressed in two ways: firstly, what technology is purchased and secondly, how technology is used. Where cooperatives

grow out of conventional businesses technology will often be inherited. Thus output is likely to be constrained by the capacity and nature of technology in the previous work environment. This may be the very reason why a previous firm was unsuccessful and 'rescued' by the formation of a cooperative. Cooperatives may also be tied to major customers or contractors and their technology therefore determined for them. In circumstances where cooperatives are able to buy new technology, they are likely to be constrained by money. This may force the cooperative into buying second-hand machinery or machinery which is less efficient than that which would be optimal.

Cooperatives in positions of market dependency, particularly where this manifests itself in terms of dependency of a particular buyer or competition with a larger firm, are likely to be conducive to self-exploitation. Often survival will require the reduction of prices and therefore costs. This is likely to mean reductions in the largest cost of all, namely wages. Surpluses are likely to be cut significantly and growth rates consequently slower. In a cooperative whose objectives include the generation of more employment, their plans may be considerably impeded.

## 7.4 Empirical Evidence

The discussion above leads us to some clear hypotheses about cooperative enterprises who are dominated either by larger competitors or monopsonistic buyers.

In the case of a dominant competitor we might expect cooperative prices to be forced down by significant competition, thus forcing down wages and surpluses. In turn cooperatives' aspirations of future growth rates of turnover and income are likely to be less and planned employment levels in the future cut<sup>2</sup>. Thus in comparing cooperatives with dominant competitors, to those operating in sectors where there are none, we may expect lower wages, lower surpluses and less optimistic growth aspirations.

In the case of the dominant buyer we may also expect this firm to insist on production 'at a price', forcing cooperative prices down in order to reduce their own input costs. Again, as a result, we may expect lower wages, lower surpluses and lower growth aspirations in markets dominated by dominant buyers compared with relatively 'open' markets.

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<sup>2</sup> Work has been done on using growth aspirations as measures of cooperative performance in chapter 5 but see also Welford (1989).

In the sample of cooperatives used here, there are 36 out of 69 which can clearly be seen as being in markets with large competitors and 21 out of 66 operating in markets with dominant buyers. Cross tabulations between market dependency and various performance measures should produce information about the scope and nature of self – exploitation. However, strict statistical tests of significant difference between the cross – tabulations are not possible because we have discrete observations and no real estimate of variance. Moreover we cannot necessarily assume an underlying normal distribution. Nevertheless in the tables presented below we can refer to a clear difference in some cases and elements of uncertainty in others.

#### 7.4.1. Large competitors

Table 7.1 shows the distribution of wages between cooperatives operating with dominant competitors and those operating without dominant competitors. Respondents were asked whether they considered their wage levels to be higher, lower or about the same as capitalist counterparts. Actual responses and percentages of the relevant population segment are given.



<u>Wage levels</u>	lower	same	higher	total
Dominant competitor	11 33.3%	11 33.3%	11 33.3%	33 100%
No dominant competitor	13 36.1%	12 33.3%	11 30.6%	36 100%

Table 7.1

If self – exploitation were to exist we would expect a larger proportion of cooperatives operating in the dominant competitor sector to be experiencing lower wages. This is clearly not the case. Indeed there appears to be no real difference between the two types of market with respect to wages.

Turning now to surpluses, respondents were asked how big their surplus was as a percentage of the total wage bill. Table 2 gives the average reported surplus in each type of market:

Dominant competitor	15.9%
No dominant competitor	15.3%

Table 7.2

Again there is no clear difference between the two types of market.

Turning to growth aspirations we can divide our sample into firms expecting low growth (less than 10%) and others expecting high growth over the following twelve months. For this analysis any longer period seems less useful since market conditions are more likely to change in the longer term. Table 7.3 examines expected growth rates in turnover, employment and incentives respectively:

	low growth	high growth	total
<u>Turnover</u>			
Dominant competitor	6 18.2%	27 81.8%	33 100%
No dominant competitor	16 44.4%	20 55.6%	36 100%
<u>Employment</u>			
Dominant competitor	20 60.6%	13 39.4%	33 100%
No dominant competitor	23 63.9%	13 36.1%	36 100%
<u>Incomes</u>			
Dominant competitor	19 57.6%	14 42.4%	33 100%
No dominant competitor	21 58.3%	15 41.7%	36 100%

Table 7.3

There is a clear difference between the two competitor sub-groups with regard to turnover growth. However exactly the opposite is happening to what we hypothesised. Cooperatives with dominant competitors are expecting a significantly higher growth in turnover than those without dominant competitors. Maybe this reflects the idea that dominant firms are only interested in operating in markets which are buoyant and are likely to grow, thus allowing them to make large profits, and cooperative firms might therefore be benefitting symbiotically from this.

There exists no clear difference between subsets with regard to employment or income growth and we must reject our basic hypotheses once again. Thus with respect to large competitors we have no clear evidence that domination by large firms leads to self-exploitative behaviour.

#### 7.4.2 Large buyers

In a similar fashion to table 7.1, table 7.4 shows wage levels compared with capitalist counterparts in markets distinguished by the existence of a dominant buyer:

<u>Wage levels</u>	lower	same	higher	total
Dominant buyer	4 19.0%	10 47.6%	7 33.3%	21 100%
No dominant buyer	18 40.0%	13 28.9%	14 31.1%	45 100%

Table 7.4

There are clear differences here but once again in the opposite direction to that hypothesised. The results indicate that lower than market wages are less likely to be paid where a cooperative enterprise is faced with a dominant buyer. One explanation of this may be associated with the security that a large buyer provides. In securing contracts with the buyer, a cooperative reduces its level of uncertainty, can plan production targets and may feel more able to pay and sustain higher wages. In earlier chapters we have discussed the niches which small firms can exploit and franchise and subcontracting arrangements which might be common here.

Turning now to surpluses, table 7.5 gives figures for average reported surpluses:

Dominant buyer	13.3%
No dominant buyer	13.8%

Table 7.5

Again no clear difference exists and we must reject our basic hypothesis. It may be worth pointing out that these reported surpluses are approximately 2% lower than those reported for cooperatives operating in markets with dominant competitors, although this difference is not statistically significant.

Finally turning to growth aspirations, table 7.6 gives growth aspirations over a 12 month period for turnover, employment and incomes respectively.

	low growth	high growth	total
<u>Turnover</u>			
Dominant buyer	5 23.8%	16 76.2%	21 100%
No dominant buyer	17 37.8%	28 62.2%	45 100%
<u>Employment</u>			
Dominant buyer	11 52.3%	10 47.7%	21 100%
No dominant buyer	31 68.9%	14 31.1%	45 100%
<u>Incomes</u>			
Dominant buyer	12 57.1%	9 42.9%	21 100%
No dominant buyer	26 57.8%	19 42.2%	45 100%

Table 7.6

In the case of income growth there clearly exists no significant difference but in terms of turnover and employment growth elements of uncertainty are apparent. But again both tables indicate relationships opposite to those hypothesised. In particular we are left with the impression that in markets dominated by a large buyer cooperative enterprises are more optimistic about turnover growth and employment growth than cooperatives in markets without a dominant buyer. This

adds further weight to the idea that the buyer reduces uncertainty and provides a stable market, leading to a better environment for the successful operation of the small enterprise.

#### 7.4.3 Self – exploitation and individual choice

Despite the findings above there are many readers who can doubtless cite example of cooperatives they know where wages and surpluses are low, where working conditions are poor and where prospects for the future uncertain at best. To others though, the ability to exploit oneself given individual choice might seem a little contradictory.

A possible way forward however may be to see cooperative workers' remuneration in more general terms, which will include not only wages and a share of expected future surpluses, but also the possible utility derived from working for oneself, being part of a cooperative movement, working with friends, not having to deal with authoritarian relationships, making a socially useful product, as well as a range of other social and political motivations. In this way we may expect cooperative workers to accept a discount on financial returns, namely earnings, both at present and into the future. A women's cooperative paying themselves low wages may be doing so, for example, in order to provide each other with flexible shared childcare support. Were this

arrangement not so, then they may not be able to work at all. Thus those who see cooperatives as vehicles of self-exploitation may be taking a rather narrow view of remuneration. They need to examine the notion of self-exploitation rather more fully.

#### 7.4.4 Links with Management Structure and Political Motivations

We need to explore the possibility that the external environment, in terms of competitors and buyers and the decision as to whether to employ management or to adopt political motivations are linked. Table 7.7 explores these cross-tabulations:

	Management(42) No Man.(30)		Political (39) Non – Pol.(39)	
Dominant Competitor (33)	19	14	15	18
No Dominant Competitor (36)	23	13	19	17
Dominant Buyer (21)	11	10	13	8
No Dominant Buyer (45)	25	20	19	26

(total numbers of firms in parenthesis, (numbers do not always add up because of missing data)

Table 7.7

In the case of management structure differences simply reflect the fact that in the survey more firms adopted a managerial structure than did not and we can find no real difference here. Although numbers are small and we have to be careful in interpreting them we might suggest that it is more likely that firms follow political motivations when there



are dominant buyers. This is perhaps a surprising result and reflects what we have already suggested about a need for conventional security in order to pursue political objectives. We return to this theme again in chapter 8.

### 7.5 Conclusions

In this chapter, the survey of cooperatives has been examined in terms of their market dependency. Two scenarios have been examined; one where a dominant competitor exists and the other where a dominant buyer exists. No hard evidence has been found to support the view that dominance by a large capitalist counterpart is likely to lead to self-exploitation within the cooperative. Indeed in the case of the dominant buyer some evidence is found to suggest that this arrangement gives the cooperative a degree of support and certainty enabling it to operate more successfully in terms of wage payments, surplus generation and growth aspirations, and that this in turn may enable it to better pursue political or cooperative objectives. This tends to support a 'flexible specialisation' type of view where small enterprises can exist alongside larger ones by holding relative advantages in some areas, satisfying particular subsets of demand and via subcontracting and franchising arrangements. More discussion of this point is found in chapter 8.

## **CHAPTER 8**

### **CASE STUDIES**

#### 8.1 Introduction

The aim of this chapter is to examine some of the issues raised in this thesis with reference to a small sample of six cooperatives. Whilst not exhaustive in any means information about these cooperatives has been gathered over a two year period during two or three visits to each supplemented by a range of other information. However it was always part of the agreement to visit that detailed financial material should not be disclosed. Nevertheless this thus provides short case study type material capable of illustrating facets of the modern cooperative enterprise.

The six cooperatives, whose names have been changed to ensure anonymity, were not chosen at random but rather reflect a geographical and size dispersion which seems to be as representative as such a small sample is capable of being. A summary of their basic characteristics is contained in table 8.1. Neither has every detail of every cooperative been reported or investigated. The emphasis has been on reporting what seems important to the cooperative itself allied to the general subject matter of the preceding chapters. Thus the material contained in this chapter should be seen as an illustration of much of the preceding discussion.

### Characteristics of the Cooperatives Examined

#### Boy – Girl Fashions

Membership: 3 (all women)  
Location: Hampshire  
Product: Clothing  
Established: 1987 (from new)

#### Back to Basics Health Food

Membership: 3 (all women)  
Location: Yorkshire  
Product: Health Food  
Established: 1986 (from new)

#### Underground Shoes

Membership: 13  
Location: Somerset  
Product: Shoes  
Established: 1982 (from factory closure)

#### Trillion

Membership: 15 (10 full – time, 5 part – time)  
Location: Northamptonshire  
Product: Plastics  
Established: 1966 (from new)

#### Rudolf Protective Clothing

Membership: 43  
Location: Scotland  
Product: Protective Clothing and Overalls  
Established: 1981 (from factory closure)

#### Cruelty – Free Cosmetics

Membership: 6  
Location: Derbyshire  
Product: Cosmetics  
Established: 1984 (from new)

Table 8.1

## 8.2 Boy – Girl Fashions

Boy – Girl Fashions is a relatively young cooperative, established at the beginning of 1987 by three young women, recently having left college where they had been fellow students studying fashion and design. With the intention of designing and making clothes their decision to establish a business of their own was largely a result of being unable to find suitable and rewarding work elsewhere. The decision to form a cooperative was a result of support from the local CDA which has a 'shop – front' office (the women were passing and thought it would be a good idea to go in) but they also said that equality in the workplace was important to all of them. It had clearly become important for them to work for themselves and a theme amongst them had become "working for ourselves and each other". They pointed to the importance of incentives indicating that they felt these were increased by working for themselves.

Having no finance of their own to establish the business they were able to take advantage of a £5000 grant from the Prince of Wales Trust for young people and overdraft facilities to £3000 from the Cooperative Bank. Again it was the local CDA which proved vital in establishing these links and in helping to put together an extensive business plan from which they were able to get support.

During the early period of business the women earned £40 per week, registered as part of the enterprise allowance scheme. Their intention was to increase this by £10 every three months and pay themselves bonuses for hard work if possible. But ultimately the aim was to work less hours rather than earn substantially more money. In the shorter term surpluses were needed to pay off the overdraft, invest in more machinery and general expansion.

A year after establishment there were still three members and one of the key objectives of the cooperative was still job security and job creation. Wages had risen by £30 per week over the year (£40 was planned). When possible it was intended that like-minded new members should be introduced on a trial basis ever mindful of the good working atmosphere which existed between them. Other objectives included the maintenance of the self-employment ideal which meant that they did not envisage any hierarchy being created. My own observation was that amongst the three women there was not a dominant personality particularly such that this seemed feasible. Expansion of the business in general was stated as being important.

Whilst their planning horizon was not long (they never spoke of anything beyond 18 months) they were anticipating substantial growth.

Although, possibly working against this, there was a desire to be able to be more selective about the type of work they took on. In other words there was evidence of a trade-off between growth and the production of a particular product. The cooperative began its life with high aspirations not only linked to general success but also linked to the type of work they envisaged doing. The creation of an individualistic designer collection was the target in terms of the type of work looked for. At first the women had spent very little time on creating their own clothes, largely because it had proved very difficult to find outlets for unique garments. A lot of time has been spent on making clothes to order, including many dresses for special occasions, wedding dresses and bridesmaids' paraphernalia.

A strong characteristic of the group was self-determination. They were confident about being able to work together and jointly deciding on who did what work. Monitoring each other was not even seen as an issue since when there was work to be done they felt they could trust each other to do it. To some degree there was a recognition that they should specialise in what they were good at, this meant that one member, for example, had taken on the responsibility for administration.

Two years after the establishment of the cooperative a unique designer collection had been put together. It was achieving some limited success with small independent retailers but had resulted in the women having to turn down other work which might have been more lucrative. Even so the women had managed to increase their wages to £100 per week. But there is clearly evidence of the type of trade – off discussed in chapter 5 where concentration on a particular product had restricted growth which may have otherwise occurred. The women were aware of this and recognised it but found much more satisfaction in designing and making their collection, being prepared because of this to take a discount on earnings.

With expanding orders and a need for the marketing of their product one woman has taken over all the administration whilst the other two are spending roughly equivalent times on marketing, essentially taking samples around independent retailers. The administrator seemed to be taking on allocative tasks as well and one is left wondering whether this is the beginnings of a management role being developed with possible consequences for degeneration.

The women were all equally involved in the production process but recently this has involved working longer hours than had been planned and there was much discussion on my last visit about the possibility



of taking on a new member. The key issue here was about maintaining a good atmosphere rather than a consideration about whether the cooperative could cope financially with another member. Thus the doubts about employment expansion were more related to the maintenance of non – pecuniary utility than (Illyrian) income shares.

### 8.3 Back to Basics Health Food

Originally established in 1986 by two women, this health food cooperative now has three women members. The business ran from home for the first few months but the cooperative now rents kitchen space in a local enterprise complex. Based in Bradford it produces a range of vegetarian and vegan food for local health food shops, restaurants, wine bars, the photographic museum and a few regular individual customers. It also does vegetarian catering for parties, business lunches and weddings. The cooperative was originally financed by an interest free loan from the two women's families.

A characteristic of the cooperative is its flexible working arrangements. Members usually work between 20 and 40 hours per week determined by the number of orders, although at busy times, such as during the Bradford Festival this rises substantially. At slack times the cooperative members prepare pre – packed, microwave ready meals for the freezer.

Turnover was slightly above £20,000 per annum in 1988 and almost £26,000 in 1989 and although the mark up between ingredients and finished food is quite substantial, (gross profit for 1988 was 76% of turnover) the members can pay themselves only £2.50 per hour. There is no surplus to be distributed amongst members because investment in machinery is still incomplete. This immediately raises the question of self-exploitation discussed in chapter 7. To some extent the members agree that they are exploiting themselves; they all had previous jobs where they were earning substantially more money. But apart from enjoying "being our own boss" and "self-control" the existence of the cooperative is largely due to the women having responsibilities of childcare. Thus the flexible working arrangements are largely based on recognition of each others domestic responsibilities. The arrangement not only provides employment for the women but also guarantees shared childcare support. Work is often organised around picking each others children up from school and around school holidays. The women's partners do help with childcare, particularly in the holidays, and occasionally help out with jobs in the cooperative when things are busy.

In 1988 the third member of the cooperative was a probationary member for six months prior to being admitted on a full equal basis.

To find the new member an advert was placed in the press and in wholefood shops. From five applicants one was chosen by interview. She was the one who showed most commitment to working cooperatively and whom the two founders thought they would be able to get on with best. The 'atmosphere at work' being protected, the third person is now a full member but this does illustrate the caution often taken in expanding the workforce which was discussed in some detail in chapter 5.

Only a little help was provided by the local CDA, although the cooperative did not seek very much. But one of the greatest sources of help and advice has been their main supplier – Suma. Suma even buys back some of the cooperative's range of microwave – ready frozen meals which is a valuable source of support and extended credit. Largely because of this support the members of the cooperative see themselves as part of a cooperative movement and would be keen to help other cooperatives being established. Although not strongly involved in the political side of the movement they are involved in the movement towards promoting healthier eating.

At the end of 1988 considerable expansion in terms of diversification was planned in the cooperative. The women were examining the possibility of establishing a health food café in the city at which time

new members would be expected to join the cooperative. These would not necessarily all be women. This café will open in September 1990, helped by a grant from the local authority and with the inclusion of a fourth member of the cooperative who has been through a four month probationary period. This is another woman with a child, like the others, interested in shared childcare. No men applied to join the cooperative and the view taken was that none were interested in the relatively low rates of pay. Thus a period of hard work and further expansion is planned.

#### 8.4 Underground Shoes Ltd.<sup>1</sup>

The Underground Shoe Cooperative, based in Somerset, was formed in April 1982 following the closure of the Clarkes Shoes factory in the town. The factory had employed 200 workers and was the major employer in the area. Although the parent company had a wide range of retail outlets, the combined effects of recession and the increasing imports of cheaper shoes had forced the company into a rationalisation process. The decision was made to close the factory which specialised in women's fur – lined boots.

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<sup>1</sup> Much of the discussion in this section has been supplemented with information from Bate and Carter (1987).

Within the community the factory closure was seen as a disaster, with the local press reporting the story, with associated tales of gloom, very widely. It was this 'community crisis' which galvanised support from various groups aimed at keeping the shoe factory afloat. When the idea of a cooperative was suggested it was not long before this was being supported by the local District Council, the workers' trades union, the local press and the area's Conservative Member of Parliament. An action committee was formed in order to make plans for the cooperative and seek appropriate financing. In the end it was the parent company, keen to maintain a caring image, which came up with a package of help. It offered a free lease on the existing premises and machinery plus the payment of overhead costs for a sixth month period. However there was a rider to this imposed by Clarkes which was that the cooperative must not produce goods which in any way competed with their own goods. The full implications of this were probably not fully appreciated at the time the cooperative was established. But in tandem with this support the local trade union offered a retail outlet for the factory's products for a trial period of three months. However, much of this support was offered but eventually failed to fully materialise.

The initial plan was to provide employment for 80 out of the 200 workers but this was soon found to be unworkable. The number was

first reduced to 30 and then to 18. Today this number has fallen to 13 plus two YTS trainees. In the end therefore the establishment of the cooperative did not prevent the 'community crisis'.

In July 1982 the cooperative was established with four worker directors elected to advise a production manager who was made responsible for day – to – day managerial affairs. In other words, clear managerial roles had been protected and to some extent and the existence of four managers out of 18 might be seen as somewhat top – heavy. At monthly meetings policy decisions were to be made on the basis of majority voting. One of the first decisions of the meeting was that wages should be equal for all members and that any surplus should be distributed in accordance with the members' wishes. In the event the first year profit of £5000 was ploughed back into the business.

Having abandoned piece work and strict production line methods from the outset the atmosphere of the cooperative obviously became important. Bate and Carter (1987) report the following comments from members of the workforce at that time:

"I was pleased to get out of that rat – race."

"Piece work was a bad thing; it affected people, they were totally different on piece – work – strung up; it worried them, made them bad tempered and bitchy."

"I never liked piece – work; all rush and no work quality."

But although there was much optimism and a feeling of self – determinism in the cooperative in the early stages the production condition imposed on the cooperative by Clarkes was soon seen as very restrictive. The cooperative was pushed into producing a man's down market shoe which had to compete with cheap, foreign imports. This pushed profit margins down. After three months of operation the retail outlet offered by the trade union had not materialised. In the event it never did, with the union claiming that it had not actually made any formal offer – only talked about a possibility. On approaching banks for help with obtaining extra capital, members were met with caution, suspicion and some hostility. As a result of all this the cooperative was forced to operate for twelve months without any loans, producing a product which required a significant scale and turnover to be profitable and with workers working many extra hours for no extra wages.

Production problems were not helped by difficulties experienced in obtaining raw materials and the common requirement that the cooperative should pay before delivery. Associated with this the cooperative found it increasingly difficult to find customers leading to severe cash flow problems. The cooperative was constrained considerably therefore by its external environment, the banks, former owners and suppliers.

The struggle for survival and the need to work long hours for little money helped to generate a strong independent spirit among the workforce. During the second year of operation the product itself was promoted as a sign of independent identity and quality. Customers were assured of a high level of service. Within the cooperative the notions of equality and job satisfaction were a source of pride and satisfaction.

Again, Bate and Carter (1987) record the following comments made by members at that time:

"Our meetings are a really good idea. This is where cooperation part comes into it. You can have a say in how things are run. You can have the chance to give your ideas."



"People keep coming up to me and asking what I think of this or that. I was just a shop floor worker. I feel I have changed; no – one ever asked my opinion about work before."

"You haven't got a gun at your head all the time."

"It's nice to feel part of what goes on. Before if you said anything you usually got your head bitten off – whether you were right or wrong. The white coats made the decisions and that was that."

During this second year the cooperative also managed to attract external funding of £35,000 from COSIRA and banks extended overdraft facilities. When eventually the lease on the premises and machinery came into the hands of the cooperative it appeared that the final links between the members previous employers and the cooperative had finally been severed. Although this led to a feeling of self – reliance and independence, the need to find work soon meant the cooperative was actually undertaking contract work for the old bosses and a strong, dependent link was therefore established with a dominant buyer. This buyer ensured survival of the cooperative even though margins

were so tight that wages had to be cut for a short period and we might suggest that the company went through a period of enforced self-exploitation in order to survive (see chapter 7).

Thus full self sufficiency was difficult to achieve and for some members this led to less optimism and certainly less idealism. Low profit-margin contract work made it seemingly necessary to reintroduce a division of labour and production line techniques. But this in turn led to a poorer standard of work and at one time Clarkes cancelled the contract.

As time passed and members left the cooperative they were generally not replaced. There have recently been internal strains particularly between the worker directors and the rest. This has in part been the result of the management group taking on all of the administrative tasks and the acceptance by some members that this group should be allowed to take on more of the decision making. It is clear though that other members are feeling that they are losing their democratic control. Some full meetings of the workforce have recently been cancelled with management stating that there are no decisions to be made. It seems that full reporting back from management may not be occurring. This is exactly the sort of degeneration scenario due to management which was discussed in chapter 6 and future

developments will be interesting to watch.

The recent establishment of a factory shop has meant that the cooperative is less dependent on contract work, although work has become seasonal with the summer tourists providing the shop with a flow of customers. The cooperative probably now does have a viable and sound base for continued employment of the present workforce of thirteen people. It is clear though that the atmosphere is less idealistic and there is a clearer demarcation in the workplace than there seemed to be three or four years ago with a clear role for management retained and possibly increased. The atmosphere in the cooperative is still dominated by the struggle for survival with ideals and to and extent incomes being the cost of this survival.

#### 8.5 Trillion Ltd.

Trillion supply a range of glassfibre materials, plastics and craft materials to schools, youth organisations and artists as well as to other firms. It formulates a range of resins for a range of fibre casting applications as well as offering a D.I.Y. package for building canoes. The range of materials and mouldings made by the firm are a major part of the craft curriculum in many schools which is the firm's biggest market. The firm has recently launched a new range of plastic based

craft products for primary and middle schools which after extensive market research it expects to be very successful.

Trillion has been operating as a cooperative since 1966 when a small group of people particularly interested in the artistic uses of plastics in their own right, rather than as substitutes for other materials, came together in a disused warehouse. With their own finance and a loan from another cooperative eight people rented space in the warehouse and set about developing methods for making resin castings, moulds and sculptures. They chose a cooperative, egalitarian form of enterprise because of religious convictions.

In 1968 the group appointed a managing director with the task of working with the existing group to create a viable trading company. By 1972 a building was purchased and the major part of the £16,000 in start up loans had been repaid. In 1973 Trillion became a Common Ownership Company along with a number of other firms who had come together as members of the Industrial Common Ownership Movement. At the end of 1976 the cooperative had fourteen members.

Trillion, based in Northamptonshire now has ten full time and five part time members and no outstanding loans. It has a management structure headed by the managing director assisted by the general

manager. Trillion's rules include a statement that:

"The company's main aim is to create a community of people with shared objectives rather than an economic profit centre."

The company is therefore quite small and expectations are that it will remain so. Another company document indicates the implicit trade off between growth aspirations and other wider objectives discussed in chapter 5:

"We see no merit in growing larger as Trillion's aim is to create a community with an ongoing concern for mutual security and quality of life at work."

There is no clocking on or off and overtime is done only when necessary and is unpaid. The working week is organised flexibly and everyone works nine and a half days in two weeks. There are salary differentials in the ratio of less than 2:1 between the highest paid and the lowest (excluding the two trainees) based on skills and responsibilities. The cooperative thinks that these wages are generally in line with market rates, with the possibility that management is being

paid slightly less than they would elsewhere and the lowest paid, slightly more.

On the subject of management structure another Trillion document claims that:

"The Management style is informal, with maximum involvement and participation. Whatever authority the Manager has is freely given to him by his fellow members. To use conventional words 'Directors' are in daily contact with 'Shareholders' who in turn know far more about the business than would usually be the case because they all work together."

My own observations are that a considerable amount of informal collective decision making is done by consultation even on a day to day basis but that given the relatively large turnover of the company and large number of customers the managers are privy to large amounts of administrative information which they are able to use to good effect when decisions are to be made. The view of the Managing Director is that better decisions are made after consultation. But nevertheless there is an extent to which he controls information and is able to strongly influence the collective decision – making, even

if this is almost subconscious as discussed in chapter 4.

Important decisions which can wait are discussed weekly at a general meeting. These rarely last more than an hour. Decisions, agreed by consensus, include staffing, capital expenditure, approval of annual budgets, new products, sales reports and grants to social projects. A Trillion document seems to recognise that democracy may result in some productivity disadvantages as well as advantages when it states:

"Democracy is a slower process than an authoritarian regime and the mechanisms required to achieve the high level of participation demanded may seem over complex; there is however, no lack of interest in discussions and many of our methods are being increasingly adopted by other firms."

Trillion has a subsidiary registered as a charity which manages social projects. This is a strong characteristic of the cooperative. The local community is the main target for its charitable donations, with local schools being given over £300 in 1987/8. Other typical donations include Christian Aid (£200), Dr. Barnardo's (£100), R.N.L.I. (£50), Save the Children Fund (£100), Mencap (£100) and V.S.O. (£200). In total £2363 was given to various appeals and charities in 1987/8 and £2700

in 1988/9. Targets seem largely to reflect the cooperatives interest in religious causes and in child based projects. Again, the Trillion document states:

"Members have differing motives for joining Trillion. Some will see job security in an increasingly insecure industrial society as an important consideration, while others will be attracted by the opportunities of real participation. It is relevant that a majority of the founding members were practising Christians whose commitment led them to develop a new kind of industrial community. While a number of the members today may not be committed Christians, we still attempt to reflect the view that people at work have social and spiritual needs as well as material ones."

Despite the reduction in members since 1976 gross sales and profits have increased in nominal terms and according to the managing director in real terms as well. The only year the firm has ever made a loss was in 1982. At the end of 1988 gross sales were £663,598 with a profit of £45,940 (7.0%). A bonus of £27,000 was distributed amongst the members based on a formula positively associated with wage rates and years of service.



The key characteristic is the adoption of alternative principles and a recognition that this will result in less growth and even some inefficiency. Committed to their product and to social and community concerns they (unlike Underground) are in a healthy position to promote and pursue their other objectives. But they have managed to follow these objectives by being primarily (conventionally) successful.

#### 8.6 Rudolf Protective Clothing Ltd.

This large cooperative of 43 members produces a range of overalls and specialist protective clothing from its factory in Scotland. Like Underground Shoes it too was born out of a potential factory closure. Taking over the factory as a complete package from its large holding company in 1981, the whole workforce, then numbering only 24, took out loans (mostly secured on their homes) in order to supplement grant and I.C.O.F. finance in order to purchase the factory lease and a nominal goodwill payment. These secured loans amounted to about 50% of the capital required.

The firm was established as a cooperative largely because of the significant help given during the difficult transitional negotiations by the local CDA. It was they who managed to secure finance for the

cooperative and who convinced the holding company that it was better to reach a buy – out agreement than to have to pay large redundancy sums.

In the early years the cooperative maintained a similar managerial framework to that which had operated previously. A general manager and three assistant managers being responsible to the whole workforce rather than to more senior external managers as was previously the case. But this relationship soon proved problematic with the workers expecting more influence over decision – making processes than they were in fact given in practice. Managers in turn seemed unwilling to relinquish many of their decision – making powers. Over time managers began to withhold information, made more and more policy decisions and tried to determine wages and institute productivity bonuses and differential payments. The internal wrangles were solved after about two years when the general manager and four other members of the cooperative left to establish another firm (not based along cooperative lines). The three remaining managers kept their positions but were supplemented by two other members who had been instrumental in establishing the cooperative with the CDA early on. Together these five members constitute a management team which is now based on strict egalitarian principles and where duties, roles and responsibilities of managers are clearly defined and managers having to give a regular

report of their activities to the whole workforce for approval. Thus although the management role has not been abandoned there seems to have been a period of regeneration within the cooperative (this concept was discussed in chapter 6) where managers relinquished much of their power and time was set aside to discuss, establish and develop more cooperative egalitarian principles. Full meetings of the cooperative regularly take place on Saturday mornings once a month. It is the responsibility of managers to present a full report of the firm's activities over the previous month, justify any decisions they made on their own and advise on longer term policy matters.

One of the tasks of management is to allocate work needing to be done. Some members have particular skills such that work is often divided up very much along skill lines. Nevertheless all workers, except for those on a six month probation, are paid exactly the same basic rates of pay which are roughly equivalent (before any bonus payments) to that paid in similar traditional firms. The cooperative has taken advantage of the government's recent profit-sharing tax incentives, linking pay to profitability and therefore reducing the tax burden of individual members. The firm suggests that the bonus, paid as a profit-related element, raises gross wages to above that in comparable traditional firms. The expectation is that wages will be able to rise substantially above inflation rates over the next few years if expansion

continues along its present trend.

At present the cooperative employs 43 members and the expectation is that that number is set to increase by about four members a year for the next three years at least. In the past when orders have been low the cooperative has turned its attention to producing all-purpose overalls to use spare capacity. But currently there is little such spare capacity and paid overtime is commonplace. The company has therefore seen substantial growth in terms of turnover, employment and incomes paid to members. For the past three years a surplus has been made and 25% of this has been paid as a bonus to members. The remaining surplus has been reinvested in the business, largely in new capital equipment. The cooperative currently has a contingency reserve of about £125,000, part of which it has placed with I.C.O.F. It has not in the past made direct grants to charity or other cooperatives though.

There exists no great competition in this specialist market and products are largely made to order. Capital equipment is flexible and members pride themselves in having a wide range of skills and expertise. It is the opinion of members in the cooperative that their products are of much superior quality to their competitors'. Indeed this pride in the product is a very important philosophy in the firm. A high quality of

workmanship is also emphasised and these principles are stressed in the firm's marketing. But products are made in the most part for a few large customers. This has made Rudolf rather dependent on these buyers for its survival. Nevertheless it is largely the patronage from ten large buyers and a stable demand for their products in turn, which has allowed the company to expand substantially in the last five years. The success and survival of these large firms has led to the success and survival of Rudolf. Thus as discussed previously (chapter 7) the existence of stable dominant buyers of a product where there is not great competition has been central.

Compared with Underground where the market is very competitive (including significant import penetration) and dominant buyers have been exploitative rather than supportive, Rudolf has operated in a far more optimistic market. In addition Rudolf has benefitted from the characteristics of flexible specialisation. It is producing largely for a specialised market with flexible machinery and a highly trained flexible workforce. Underground was forced into producing low value added, basic products susceptible to fierce overseas competition using traditional production line technology and practices. There are clear lessons here for any small company beginning a new venture.

## 8.7 Cruelty Free Cosmetics

From a small workshop site in Derbyshire, Cruelty Free Cosmetics, made up of six members, manufactures cosmetics made from natural products which have not been tested on animals. The cooperative was established in 1984 by four members who wanted to promote a product which was important to them as animal rights campaigners and vegans. This they saw as their main aim in the establishment of the cooperative and three out of the four members who were in full time employment took a cut in pay from their previous jobs in order to do so. It was important for the members of the cooperative to create jobs in what they termed a "sound environment". Five years after the cooperative's establishment the members still consider that they pay themselves a lower wage than a comparable job in a non-cooperative organisation. All members are paid the same rate and feel that the friendly and flexible atmosphere in which they work largely makes up for the relatively low wages. In other words rather than seeing a self-exploitation problem here the extra utility gained from the positive atmosphere seems to make up for this. We have discussed this previously in chapter 7 when suggesting that notions of self-exploitation and individual choice were really not compatible.

The aims of the cooperative are clearly set out in their business plan.

These are:

1. To manufacture, retail and wholesale cruelty free skin and hair care products.
2. To make the public aware of animal exploitation by the cosmetic industry.
3. To market goods without unrealistic claims of emotional and physical benefit of their use.
4. To support other groups with similar aims.

The cooperative realises that it is operating in a small but rapidly growing market. Its main problem has been getting its product widely known. Experience suggests that once established good customers tend to be loyal because of the nature of the product. Growth is anticipated over the next few years with the expectation that new members will be introduced. In the past year the company has benefitted from the widespread anti-cruelty publicity provided by such companies as the Body Shop. In addition Cruelty-Free Cosmetics has increased its own publicity mainly by placing advertisements and

inserts in magazines aimed at environmentalists, those with a political leaning to the left and trades union newsletters.

In 1988 the view was that growth could be substantially increased, and members themselves could earn much more money, if they dropped their cruelty-free principles. There is a huge market in cosmetics made from "natural" products or synthetics which are claimed to be natural, but many of these ingredients are not cruelty free. One great problem is that it is often more expensive to buy shampoo based constituents, for example, which have not been tested on animals. In this instance there is a clear trade off between potential growth and vegan principles. The view therefore was that there was a clear trade-off between the production of a particular product and growth. Some evidence of a more widespread relationship similar to this was found in chapter 5.

Now the opposite view seems to prevail though and the feeling is that production of this particular product, at least, has actually led to success as a result of increased public awareness. In the past year alone turnover has more than doubled and two additional members have been taken on, mainly to deal with increased distribution and marketing. An increasing number of products are sold through mail order. Generally, the products are a higher price than equivalent



non-cruelty free ones and on a par with Body Shop merchandise. As a further tool of differentiation the firm also emphasises its cooperative principles and small size. Most traditional, large retailers are unwilling to take on the product because of its relatively high price and even where they are interested the discount demanded by them has been too large to make it worth the firm manufacturing them. Cooperative retail outlets such as health food shops have proved to be successful outlets though. The success of the firm is clearly related to the existence of an "alternative" niche market.

In this cooperative there is no management structure, all jobs are done by everybody and all surpluses are reinvested in the firm. Members work as required which usually entails about 36 hours a week unless there is an order to complete when overtime is worked without payment. In principle administrative tasks are rotated in a three-monthly cycle, although an increased amount of job specification seems to be occurring as business increases. At the moment there is a recognition that the egalitarian structure does slow down decision-making since everybody has to be consulted. But there is a widespread negative feeling towards anyone taking over a management role. When the management issue is discussed the clear worry is that he/she will come to dominate, that others will be told what to do rather than work being largely jointly-determined and that the

atmosphere would suffer. There are clearly fears of a degeneration scenario.

## 8.8 Discussion Relating to Major Principles Identified in the Thesis

The main aim of these case studies is to illustrate the key issues raised above. It therefore seems sensible to deal with the issues in the order they are dealt with in the chapters above. The issues relate to internal structures (chapter 3), objectives of the cooperative (chapter 4), growth (chapter 5), management and degeneration (chapter 6) and the external environment and self-exploitation (chapter 7). In addition we have highlighted the interlinked nature of many of these ideas and in particular some trade-offs between various objectives and behavioural patterns have to identified.

### 8.8.1 Organisational form

There is clearly no single form of structure within the cooperative organisation. The smaller cooperatives in this chapter do not operate on a hierarchical basis which is not surprising when dealing with three or four members. One of the clear objectives of Boy-Girl Fashions was that a hierarchy should not emerge. Although, ironically, one

member had taken responsibility for administration and it is often along this route that an informal hierarchy does seem to emerge. Where a hierarchical relationship has existed this has often been a source of internal conflict. In the case of Rudolf Protective Clothing the inability of management to fully take account of the wishes of the workforce and an attempt to follow some of their own objectives nearly split the cooperative. In Trillion though, the hierarchy exists essentially for administrative purposes and there is a great deal of discussion done informally on a daily basis with all members of the cooperative. Management is therefore adopted for essentially efficiency reasons. Members of Trillion recognise that democratic decision-making is a slow process but that better decisions are made at the end of that process.

Assignment to tasks seems to be done effectively in practice in all the cooperatives with members 'pulling together' in order to get jobs done when necessary. In the larger cooperatives, not surprisingly, there is more of a division of labour where particular skills are involved and in the case of Trillion this is reflected in wage differentials as well. In the Underground Shoe cooperative this division of labour actually increased with time as the firm was forced to adopt more traditional production line techniques in order to compete with large competitors. In this case the external environment dictated internal change. But in the

case of Rudolf the external environment tends to free up the internal structure because of the security of orders which it creates. Both firms are dominated by external buyers but we have suggested that the particular product and production technique are vital elements of success here.

We saw in the case of the Underground Shoes cooperative that their struggle for survival and the need to work long hours often for no extra money generated a strong independent spirit in the workforce. This in turn engendered a strong cooperative atmosphere and a high level of job satisfaction. According to the cooperative this helped in the production of a high quality product. Members of the cooperative talked of being out of the 'rat-race' and of their positive feelings towards open, participatory meetings. Similarly in the Cruelty Free Cosmetics cooperative members stressed the importance of working in an atmosphere which was friendly and flexible. Indeed with most of the cooperatives interviewed there was a recognition that internal relationships and atmosphere were a positive source of utility. In some cases this was something to be set against relatively low wages.

### 8.8.2 Objectives and Maximands

The wide range of reasons for establishing a cooperative enterprise displayed in the survey results are reflected in the case studies. Job creation were important motivations for both Boy–Girl Fashions and Cruelty Free Cosmetics although in the latter case this was strongly linked to political motivations and the importance of a particular product as well. In the case of Underground Shoes and Rudolf Protective Clothing it was a factory closure which brought the cooperative into existence. In the case of Underground Shoes this new enterprise was much reduced in size. Trillion's motivations surrounding the production of a particular product range is mirrored by many other cooperatives including both Cruelty Free Cosmetics and Back to Basics.

A common characteristic amongst at least four of the six cooperatives examined here was the importance of some sort of external support structure in the establishment of the cooperative. In some instances this involved the CDA in others it was fellow cooperatives or the local community in general. But we saw from the case of the Underground Shoe cooperative that traditional support from banks, for example, was difficult although we could not suggest that this had anything necessarily to do with them being a cooperative.

Again the objectives of the firms discussed in this chapter reflect the range of objectives in the whole data set. These range from a need for equality as characterised by Boy – Girl Fashions, religious convictions (Trillion) and the promotion of a wider political movement (Cruelty Free Cosmetics). But other wider motivations are also common. Back to Basics was keen to promote healthier eating, Cruelty Free to campaign against animal cruelty and Trillion had a strong sense of being part of a common ownership movement, of being part of the local community and promoting the religious and spiritual side of their work. These wider motivations rather than a pure profit motive seem to be a very distinctive feature of cooperative enterprises. To some extent it is these wider motivations which led firms to more fully consider alternatives to the traditional firm structure. A very important observation from the case studies is that a degree of conventional success is needed in order to pursue these objectives. In its struggle for survival Underground was able to do little but to maintain employment.

### 8.8.3 Growth

A characteristic of the cooperatives examined here is that in contrast to traditional Illyrian theory most had quite high growth aspirations. Although an interesting aspect is that these growth expectations did not

always manifest themselves in terms of an increase in employment. Trillion for example with an impressive growth record expected turnover to continue to rise and were introducing a new product range for schools, but expected no great expansion in employment. Underground Shoes had recently experienced a reduction in employment and although they were generally more optimistic about prospects for the future, saw little possibility for employment growth. Certainly we find a great deal of caution in expanding employment, but this is more related to considerations of atmosphere rather than any other motivation. Members clearly recognise that the introduction of a new member involves more commitment and more risk than the simple employment of staff.

It is interesting to compare Underground Shoes with Rudolf Protective Clothing again. Both cooperatives were born out of a factory closure but from the beginning, in the case of Underground Shoes, employment was substantially reduced. Rudolf transferred its whole workforce from the old enterprise to the new and following a problematic period of potential degeneration increased its workforce by two – fold. Rudolf continue to expect further substantial increases in employment supported by their buoyant market position and advantages of flexible specialisation and a 'total quality management' package. Underground, on the other hand, seem to be continually

constrained by the type of market in which they are operating. Indeed not only were they constrained in conventional terms (growth, profitability etc.) but they also seemed to be constrained in the development of their cooperative principles with a movement towards more hierarchical modes and production line technology.

In some instances cooperatives choose not to grow as fast as they possibly could, often because they see trade-offs between principles and possibilities. Boy-Girl Fashions for example were keener to create their own collection, which in the short term was a risky strategy without great turnover potential, rather than continuing to do jobs to order (usually the ubiquitous bridesmaids' dresses) which guaranteed more than enough work for the three members. Cruelty Free Cosmetics were not prepared to enter the wider and potentially profitable market for naturally or synthetically based cosmetics because it was of overriding importance for them to adhere to their cruelty-free principles. Although we know that in this case and that of Back to Basics it was probably their particular type of product which differentiated them from their competitors and ensured survival in the first instance.

The cooperative with the most impressive growth record must be Rudolf. Here a management structure exists and we suggested in



chapter 5 that this may increase the probability of a high growth strategy. In this case managers certainly were looking for continued expansion of about 50% in three years. But management also existed for organisational and efficiency reasons in this relatively large cooperative (this may be expected given the discussion in chapters 4 and 6).

The cooperatives in the case study had mixed views about whether there were productivity advantages in having a cooperative structure. Certainly, Trillion and Rudolf (the two largest cooperatives) thought that collective decision making was a slow process although the view stated in the Trillion document was that it led to better decisions being made. Boy – Girl Fashions and Back to Basics clearly thought that there were productivity advantages, but they also happened to be the smallest cooperatives where collective decision making was much easier.

#### 8.8.4 Degeneration and Managerialism

A characteristic discussed at some length in chapter 6 was that periods of degeneration in the cooperative enterprise are not uncommon but it was suggested that these are sometimes followed by periods of regeneration. This seems to be illustrated well by the experiences of both Underground Shoes and Rudolf Protective Clothing.

In the case of Underground that process almost seems to have a cyclical pattern which was often heightened by external factors. The cooperative had a 'shaky' start but during the first upswing the cooperative was characterised by high levels of job satisfaction. When again external forces meant that the cooperative had to rely on low profit – margin contract work from its previous owners the atmosphere and quality of work once again suffered and the main objective of the cooperative once again became survival. Now there is evidence that management is becoming dominant again.

In the case of Rudolf there was a clear period of degeneration when after about two years of operation management began to take more and more decisions and exclude other members. This process ended when the senior manager left, management was reestablished on more egalitarian principles and the enterprise flourished. We have already suggested that where management does exist this is for largely efficiency and organisational reasons.

The theoretical literature on degeneration suggests two other sources of degeneration. In the first case, involving hired labour and an external labour market (Ben – Ner, 1984), we find very little evidence of support because all firms in the case studies had only member employees. In the second case, involving a lack of finance, we find

some limited evidence of this in the case of Underground. But this was a potentially failing company and banks were probably cautious because of this rather than anything else. In the other five cases little difficulty was reported in finding finance although this was often achieved through secured or personal loans.

#### 8.8.5 Self – exploitation and the External Environment

Low wages are certainly a common characteristic amongst the six cooperatives discussed here. Back to Basics pay themselves substantially less than the members had been getting in previous jobs or could be getting in comparable traditional firms. Boy – Girl Fashions pay themselves £100 a week but are producing a product which would be impossible to produce in any other situation. Both in Cruelty Free Cosmetics and in the Underground Shoe cooperative members worked overtime from time to time without payment. But in the cases of Back to Basics and Cruelty Free Cosmetics there are clear compensating motivations for continuing with the arrangements. For example a clear motivation amongst the members of Back to Basics is shared childcare support and amongst the members of Cruelty Free, the clear political motivations. In the case of Trillion, average wages are on a par with market rates although differentials, even though they exist, have been squeezed closer together.

It is interesting once again to compare Underground Shoes and Rudolf Protective Clothing in terms of their external environments. Underground Shoes have always been under pressure from the competitive environment in which they operate. Cheaper imports of shoes have meant periods of unpaid overtime and a need to return to traditional line methods of production. The cooperative has had to rely on contract work with low profit margins to survive. Thus the external market has had a detrimental effect on the success and development of the business. Compare this with Rudolf Protective Clothing where impressive growth has occurred largely due to the patronage of dominant buyers keen to buy a high quality product. Here the security of the market has allowed Rudolf to expand and to continue to plan for further growth and pay members incomes above the market rate.

### 8.9 Concluding Remarks

The aim of this chapter has been to provide some illustration of the issues raised in preceding chapters rather than to reach any additional observations or conclusions itself. A fuller, wider and more in depth set of case studies would be required were that to be the case (indeed this is now planned in a wider research project). No clear conclusions are really possible except to point to the great diversity

which exists in the cooperative sector. Nevertheless it is worth highlighting a few characteristics which are common in the six cooperatives studied.

Support structures, especially in the early stages of the cooperative enterprise are clearly important. We have seen that significant and seemingly effective support was provided by the CDA in the cases of Boy – Girl Fashions, Back to Basics and Rudolf Protective Clothing. Other cooperatives were instrumental in the establishment of Trillion and Back to Basics. Where support was often offered but did not materialise or where support was lacking, in the case of the Underground Shoe cooperative for example, the development and expansion of the business proved very difficult. On top of this wider government support, in terms of grants, with the use of the enterprise allowance scheme and by the adoption of profit – related pay legislation, has been useful.

A common characteristic seems to be that cooperative enterprises are often involved in decisions which require trade offs between objectives and plans. For example Trillion saw itself as part of a community and wanted to promote a caring, sharing ethic rather than operate as a "profit – centre". It also recognised the trade off implicit in having democratic decision making processes in terms of time. Back to

Basics saw a clear trade – off between accepting low wages but having childcare support built in to the work environment. Boy – Girl Fashions were willing to sacrifice turnover in order to create their own unique designer collection. Similarly Cruelty Free Cosmetics also sacrificed potential turnover growth to maintain their political principles. In general the wider motivations common within the cooperative movement often come to dominate the arguably more traditional objectives of profitability and expansion. Although we have seen that there is no reason to necessarily expect cooperatives to grow at a slower rate than capitalist counterparts, the decision not to grow as fast as might be possible, is often a deliberate decision.

The decision about whether or not to adopt a management structure is also central. The three largest cooperatives adopt one in the main for organisational and efficiency reasons although in the case of Underground there is some suggestion that degeneration is occurring. But most of the cooperatives are well aware of possible degeneration tendencies, which in turn can help them to be avoided.

The external environment in which the cooperatives exist is also important. The story is rather more complicated than a simple issue of whether the market is dominated by large capital. Certainly we know that cooperatives can operate well in niche markets and often in

the past these have been in "alternative" or artisan areas. But we also know, particularly from the case of Rudolf, that large successful firms can create an environment where a small supplier can also be successful. In both of these situations we can also conclude that flexibility and specialisation seem to add to conventional success as well as an ability to follow cooperative principles,

What is clear from these illustrations though is that the issues, which have been dealt with reasonably discretely, chapter by chapter in this thesis, are actually very interrelated. Organisational form, objectives, behaviour and the external environment all impinge on each other and effect the structure of the organisation, the members within it, and the performance and the aspirations of the cooperative firm. Indeed we find that performance also has an effect on the ability to fully implement the basic objectives of the firm as well as more tangible outputs such as wage levels.

## **CHAPTER 9**

### **CONCLUSIONS**

#### 9.1 Introduction

At the outset this thesis set out to examine some of the theories and issues associated with the organisation and behaviour of U.K. producer cooperatives. In doing so it proposed adopting alternative modelling approaches and sought to describe and explain more fully this diverse sector using largely, but not exclusively, the tools of economics. I hope that this has been achieved and whilst specific concluding remarks are made at the end of each substantive chapter, this chapter seeks to bring together some common results and findings, to expand the debate surrounding the nature of common ownership and



participation and to make suggestions and proposals for future research.

## 9.2 Contributions to Economic Analysis

There are many ways in which the success of a cooperative enterprise can be measured. In this thesis many different measures have been used and all indicate that whilst cooperative firms, like any small businesses, will face problems surviving in the market place, most seem largely successful in pursuing their stated objectives. Estrin and Shlomowitz (1988) in their study of employee ownership and worker democracy note that:

"... producer coops have emerged... [and] appear capable of surviving for very long periods. One reason is possibly that the relatively higher degree of participation – in profits, capital stakes and decision – making – implied by the coop structure imparts some advantages in terms of technical efficiency which, although typically fairly small, may offset any other organisational disadvantages to that institutional form." (p. 65)

This research tends to support that optimistic note. Many of the 'accepted' negative aspects of the cooperative form of organisation such as perverse supply – side responses have been shown to be based on restrictive assumptions about the labour – managed firm and little empirical evidence is found to support this particular line of

argument. Although we know that some cooperative firms do restrict supply to pursue other objectives. Assertions about the existence and survival of cooperatives based on ideas of degeneration and self-exploitation have been shown to be questionable in most instances. It is not difficult to find degeneration in some enterprises but it has also been suggested that this does not always result in an abandonment of other cooperative principles and is often followed by a period of regeneration. On the key issue of self-exploitation we find many instances of low wage payments but in many cases this is balanced by members pursuing other utility-generating objectives. Where individuals make a positive choice to be part of a cooperative the whole notion of self-exploitation has been challenged.

The growth of the cooperative sector over the past fifteen years in particular must reveal something of the perceived success of this form of enterprise, otherwise why did these businesses not just establish conventional forms? Moreover, growth aspirations of cooperatives indicate optimism about the future. In particular cooperatives with an accountable management structure, high capital stakes held by its members and a commitment towards self-employment have the highest probability of following a high growth strategy.

In an analysis of efficiency differences between labour – managed and profit – maximising firms in chapter 3 it was suggested that there would be a trade off between different efficiency measures as Estrin and Shlomowitz imply. A general picture suggested that productivity may be enhanced by worker participation and ownership, particularly when they are combined and that the general cooperative workplace environment could enhance efficiency. Here there are positive lessons to be learned by those interested in more general issues of worker participation in conventional firms. Nevertheless members of cooperatives have often pointed to the costs as well as the benefits of operating a structure where democracy and participation are important. About a quarter of the respondents to the questionnaire clearly felt that there was a trade – off between the political ideals of the cooperative and efficiency, stemming from slow decision – making processes, a lower expectation of work effort and an ability to raise money for expansion. Other respondents were split over whether there were productivity advantages associated with cooperative organisation. A minority clearly felt there were productivity losses arising out of cooperation. But we should remember that to a large extent the production 'norm' by which cooperatives are measuring themselves is set by the prevailing form of capitalism. When we begin to incorporate wider considerations such as socially – useful production, non – pecuniary utility and 'Green' issues the cooperative enterprise would seem to do

rather well in any ranking of efficiency.

Cooperative enterprises are often involved in a range of other trade-offs, in many cases revolving around objectives and aspirations. In particular growth is sometimes sacrificed in order to adhere to the production of a particular product range. But political principles themselves often have to be traded against survival as we saw in the case of Underground Shoes. It should be remembered that the cooperative is merely an amalgam of a number of individuals each with their own aims and objectives. In many cooperatives we have seen that these individuals are motivated by the existence of self-management, self-determination and equality. Other cooperatives grew out of factory closures or were created in the first instance to create jobs where none previously existed. This picture is indicative of the diversity of the cooperative sector. Implicitly we must accept the need for a degree of behavioural type modelling based on the behaviour and motivations of members. Authors such as Cyert and March (1963) and Vernon (1971) have long considered organisations not as homogeneous entities but rather as complex sets of interactions between different competing groups. In the cooperative there may be conflict between those with private interests and those with others. Often dominant coalitions in a cooperative will be able to attain their own ends. These coalitions often pursue management roles with degeneration tendencies.

Although perhaps alien to some 'purists' we have seen that, nevertheless, management does play an important part in the organisation and behaviour of many successful cooperatives. For example, the existence of some sort of management structure seems important in those firms with high growth aspirations. But more than anything the existence of a management structure in a cooperative seems to be as a response to organisational factors. Management is commonly seen as a skill, in some cases largely associated with administration, which needs to be performed in a similar fashion to any other skill in the cooperative. Less evidence is found to support the more pessimistic view that the existence of management in a cooperative is indicative of some degeneration of the organisation towards traditional capitalist motivations.

Nevertheless, cooperatives cannot but be affected by the existence of competing capitalist firms especially where these take some sort of dominant role. But no evidence is found in this research which necessarily implies that that situation leads to cooperative firms having to be self-exploitative. Indeed the reverse seems to be true in the case of cooperatives operating in markets where there are dominant buyers. They are often supported by their larger customers enabling them to survive and operate successfully and indeed, once

conventionally successful, to pursue their political objectives.

The work undertaken in this thesis has followed a general pattern of looking at accepted theory and debate, examining extensions of that theory and a degree of empirical testing and observation. A common conclusion seems to be that those basic theories of the cooperative enterprise are often not confirmed by empirical observation. That does not necessarily mean that those theories are useless and invalid; as Vanek (1970) notes, a labour – managed enterprise does not have to adopt income – sharing in reality for its behaviour to be in line with what one might expect if it were adopting such a policy. But many of the theories tested here have had negative connotations (e.g. perverse supply responses, degeneration etc.) and one is left wondering about the extent to which these theories have given the cooperative sector a "bad press", at least amongst academics. One contribution of this thesis is to have placed some doubt upon these negative aspects.

For those who aid the development of the cooperative sector, such as CDA's and local authorities some tentative policy recommendations might be offered. A good atmosphere in the work place is worth working at; it seems utility generating in itself and there is some evidence to suggest that it enhances productivity. As a cooperative grows in size or if it begins life relatively large a role for a specialist

manger should be carefully considered. In this thesis we have pointed to a number of advantages associated with accountable managers. On the other hand the existence of management is often the first step towards a degenerative process. Often cooperatives will be choosing that form of organisation in order to pursue other non-financial objectives. It should be pointed out though that those cooperatives best able to do this in the long run are the ones with a degree of conventional success and cooperatives for ever on the brink of survival rarely meet their other objectives. Finally the product being produced and the environment in which it is produced are vital. Cooperatives established from failing capitalist firms have been successful but are less likely to be so if they are producing a product open to significant competition. There is clearly a role for cooperative production in the tradition 'artisan' areas though, where being a cooperative itself may add to a product's attractiveness. But it has also been suggested that cooperatives who can identify niche markets can derive benefits from flexible specialisation. A quality product with a stable outlet in terms of a few large buyers will not necessarily result in profit margins being squeezed. This stability often helps cooperatives pursue their other objectives from a sound base.

### 9.3 Contributions to the Debate Surrounding Participation.

Whilst the cooperative sector in the U.K. continues to grow, it is nevertheless still small in comparison to its European counterparts and in comparison with traditional business in this country. Nevertheless, what is moving on at least as fast as the debate about common ownership and self – management, is debate surrounding other forms of participation. The term 'participation' is used to embrace both financial participation (profit – sharing and employee share ownership) and participation in control (worker involvement in the firm's decision – making process). Cable (1987) notes that the two forms of participation are often regarded as having similar underlying economic functions, but goes on to show that they have rather different roles and effects. What we have shown, nevertheless, particularly in chapter 3 is that atmosphere at work is important to the extent that some workers are willing to take financial discounts to achieve this. Moreover, where participation can improve atmosphere we might expect productivity advantages.

Much of the debate and discussion in this thesis, not least in chapter 8 where individual cooperatives are examined in some detail, suggests that worker involvement does bring about better motivation, improved atmosphere and less rigid work practices leading to greater efficiency.



In effect, participation can lead to augmentation of the neo-classical production function along the methodological lines suggested by Jensen and Meckling (1979)<sup>1</sup>.

With recent developments in Eastern and Central Europe, a participatory private sector, despite the problems encountered with the Yugoslav self-managed system, may be a productive way forward. The experience of codetermination schemes in West Germany may aid this development but we have also seen that growing evidence from a number of European countries shows that there are potential benefits associated with a cooperative structure.

#### 9.4 Lines of Future Investigation

Three clear lines of future research come to mind when one takes an overview of this thesis. The first arises from a common observation in the thesis that support structures are very important in the cooperative sector. Moreover, given that they are relatively well developed in this sector, those interested in promoting small firms in general may be able to learn much. The second arises from the experience of carrying

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<sup>1</sup> Jensen and Meckling's argument though is that there will be a negative impact on productivity if participation is introduced but their model uses ideas of augmented production functions. The idea that participation in decision-making will have positive impacts on productivity has been put forward by many authors, one of the earliest being Blumberg (1968).

out more in-depth studies in chapter 8 and the third reflects the microeconomic modelling of the cooperative enterprise undertaken in chapters 5, 6 and 7.

#### 9.4.1 An Analysis of Support Structures

Very little work has been done in the past which examines the environment in which enterprise development best takes place. By examining this environment with particular reference to the cooperative sector in Europe a picture of best practice can be developed. In the U.K. the support of the CDA, ICOM and government sponsored bodies has clearly been important to some cooperatives (they have said so). But this type of support is not necessarily indicative of that in the rest of Europe where the cooperative sector is larger. In Germany there is considerable experience of credit networks. In Italy a network of second level cooperatives provide considerable support for marketing, research and other developmental projects. But France with its large cooperative sector has few government sponsored support networks. As yet there exists no synthetic work on an evaluation of the various forms of support and their effectiveness in terms of the performance of individual firms and the cooperative sector as a whole.

The main questions for research seem to hinge around two clear but interrelated areas. Firstly, appropriate financing of cooperatives is important both at the set-up stage and during any period of expansion. But it is unclear which financing arrangements are most conducive to success, for example whether direct government support, agency support or second-level cooperative support has superior outcomes. The aim of any research would be to compare these alternatives along with the type of finance provided in various European countries and assess their relationship with various performance indicators such as survival, employment and profitability.

Secondly, technical aid in establishing the cooperative enterprise is something commonly cited amongst U.K. cooperatives (see Welford, 1989, for example). Again, what sort of help and over what time period this should last needs investigating. The avoidance of degeneration or financial collapse is another area where support structures and networks seem important. In particular there is now a great opportunity to establish these networks across Europe in preparation for 1992.

#### 9.4.2 Further In – depth Studies

We have seen particularly from chapter 8 that a more detailed insight into cooperatives can prove useful. The data on which this thesis has largely been based has been restrictive at times and as ideas have been developed one is often left with additional questions. Therefore to collect more detailed data from a sample of say, 100 cooperatives using interview techniques over a longer period of time would seem extremely interesting. Indeed work by Wilson (1982) and this thesis are to form the basis of such a research project supported by the ESRC, based at the University of Bradford under the direction of Wilson.

#### 9.4.3 Microeconomic Modelling of Small Businesses

It has been suggested that in some cases a cooperative enterprise may not be distinguishable in practice from a traditional small business. But the reverse, namely that some traditional small businesses are run along democratic, cooperative lines, is also likely to be the case. In any event the firms examined in this thesis have been subjected to some microeconomic modelling, the general principles of which should be easily transferable to any business. It therefore seems useful to consider modelling traditional small businesses and comparing findings. This may in turn add to the debate about participation – augmented

production functions as well as to the literature on small businesses in general. A fuller understanding of some of the behavioural aspects of small business may also contribute to the provision of appropriate support for new firm development.

### 9.5 Final Remarks

If this thesis has made a contribution to contemporary debate (I think it has and I hope others agree) then it must be in providing a fuller and richer understanding of the cooperative enterprise in the U.K. I am left with an optimistic and positive feeling about the future of the cooperative sector in this country and about the individual firms from which it is constituted. But more than anything, traditional businesses in general will do well to consider the wider implications of adopting some form of participation into the workplace. Moreover, the average worker spends rather a long time in his or her workplace and the quality of that workplace must have an influence on quality of life in general. A participative society must include participation in the workplace. A democratic society must include democracy in the workplace.

## REFERENCES

- Abrahamsson, B., (1977) Bureaucracy or Participation: the Logic of Organisation, Sage Publications: London.
- Altshuler, A. et. al., (1984) The Future of the Automobile, George, Allen and Unwin: London.
- Alchian, A. and Demsetz, H., (1972) 'Production, Information Costs and Economic Organisation.' American Economic Review, 62, 777 – 796.
- Atkinson, A.B., (1973) 'Worker Management and the Modern Industrial Enterprise', Quarterly Journal of Economics, 47, 75 – 92.
- Bannock, G., (1981) 'The Clearing Banks and Small Firms', Lloyds Bank Review, 142, 15 – 25.
- Baran, P.A. and Sweezy, P.M., (1966) Monopoly Capital, Monthly Review Press: New York.
- Bate, P. and Carter, N., (1987) 'The Future for Producers' Cooperatives', Industrial Relations Journal, 92, 57 – 70.
- Batstone, E., (1983) 'Organisation and Orientation: A Life Cycle Model of French Cooperatives', Economic and Industrial Democracy, 4, 2, 139 – 161.
- Baumol, W. J., (1959) Business Behaviour, Value and Growth, MacMillan: New York.
- Berman, M. D., (1977) 'Short-run Efficiency in the Labor-managed Firm', Journal of Comparative Economics, 1, 309 – 14.
- Berman, K. V., (1982) 'The United States of America: a Cooperative Model for Worker Management' in: Stephen, F. H., The Performance of Labour – Managed Firms, Macmillan: London.
- Berman, K. V. and Berman, M. D., (1978) 'The Long Run Analysis of the Labor – Managed Firm: Comment', American Economic Review, 68, 701 – 5.
- Berman, K. V. and Berman, M. D., (1989) 'An Empirical Test on the Theory of the Labor – Managed Firm', Journal of Comparative Economics, 13, 281 – 300.

- Birch, D. L., (1979) The Job Generation Process, M.I.T.: Cambridge.
- Blumberg, P., (1968) Industrial Democracy, the Sociology of Participation. Constable: London.
- Blumberg, P. (1976), Cited in Bowles and Gintis.
- Bodington, S., George, M. and Michaelson, J., (1986) Developing a Socially Useful Economy, Macmillan: London.
- Bollard, A., (1983) 'Technology, Economic Change and Small Firms'. Lloyds Bank Review, 147, 42 – 56.
- Bolton, J., (1971) 'Report to the Committee of Enquiry on Small Firms (Bolton Report)', HMSO: London.
- Bonin, J. P., (1983) 'Innovation in a Labour – Managed Firm: A Membership Perspective', Journal of Industrial Economics, 31, 3313 – 29.
- Bonin, J. P. and Putterman, L., (1987) Economics of Cooperation and the Labor – Managed Economy, Harwood Academic Publishers: London.
- Bookchin, M., (1982) The Ecology of Freedom, Cheshire Books: California.
- Bowles, S. and Gintis, H., (1976) Schooling in Capitalist America, Free Press: New York.
- Bradley, K., (1980) 'A Comparative Analysis of Producer Cooperations: Some Theoretical and Empirical Implications', British Journal of Industrial Relations, 18, 155 – 168.
- Braverman, H., (1974) Labour and Monopoly Capital: The Degradation of Work in the Twentieth Century, Monthly Review Press: New York.
- Cable, J. R., (1988) 'Is Profit – Sharing Participation? Evidence on Alternative Firm Types from West Germany', International Journal of Industrial Organisation, 6, 121 – 137.
- Cable, J. R. and Fitzroy, F., (1980) 'Cooperations and Productivity: Some Evidence from West German Experience', Economics Analysis and Workers' Management, 14, 163 – 180.
- Capra, F., (1983) The Turning Point, Fontana: London.
- CDA (1984), The New Co – operatives, CDA: London.

CDA (1986), The National Directory of New Cooperatives and Community Businesses, CDA: London

Chaplin, P. and Cowe, R., (1977) 'A Survey of Contemporary British Worker Cooperatives', Manchester Business School Discussion Paper, University of Manchester.

Chinn, D.L. (1979), 'Team Cohesion and Collective – Labour Supply in Chinese Agriculture', Journal of Comparative Economics, 3, 375 – 394.

Cockerton, P. and Whyatt, A. (1984), The Workers Co – operative Handbook, ICOM Co – publications: London.

Collective Design Projects, (1985) Very Nice Work If You Can Get It Spokesman: Nottingham.

Cornforth, C., (1983) 'Some Factors Affecting the Success or Failure of Worker Cooperatives: A Review of Empirical Research in the United Kingdom', Economic and Industrial Democracy, 4, 163 – 190.

Cornforth, C., (1988) 'Patterns of Cooperative Management: Revising the Degeneration Thesis', Paper presented to the conference New Forms of Ownership – Management and Employment, Cardiff Business School, September.

Cowling, K., (1982) Monopoly Capitalism, MacMillan: London.

Cowling, K., (1985) 'The Political Economics of Oligopoly' Economics, 21, 4, 147 – 152.

Cyert, R. and March, J., (1963) A Behavioural Theory of the Firm, Englewood Cliffs: New Jersey.

Daudi, P. and Sotto, R., (1985) 'The Sword of Damocles: On the Metamorphosis of Homo Cooperatives', Paper presented to the 7th EGOS colloquium: Challenges to Organisational Authority, Stockholm School of Economics, Sweden.

Defourney, J., Estrin, S. and Jones, D.C. (1985), 'The Effects of Workers' Participation on Enterprise Performance: Empirical Evidence from French Cooperatives', International Journal of Industrial Organisation, 3, 197 – 223.

Domar, E. D., (1966) 'The Soviet Collective Farm as a Producer's Cooperative', American Economic Review, 56, 734 – 757.



Estrin, S., (1979) 'The Utility Maximising Self – Managed Firm', Mimeo University of Southampton, July.

Estrin, S., (1985) 'The Role of Producer Cooperatives in Employment Creation', Economic Analysis and Worker's Management, 19, 4, 345 – 84.

Estrin, S. and Jones, D. C., (1987) 'Are There Life Cycles in Labor – Managed Firms? Evidence from France', European Institute University, Working Paper 86/232.

Estrin, S., Jones, D. C. and Svejnar, J., (1987) 'The Productivity Effects of Worker Participation: Producer Cooperatives in Western Economies', Journal of Comparative Economics, 11, 40 – 61.

Estrin, S. and Pérotin, V., (1987) 'Producer Cooperatives: the British Experience', International Review of Applied Economics, 1, 2, 152 – 175.

Estrin, S. and Shlomowitz, R., (1988) 'Income Sharing, Employee Ownership and Worker Democracy', Annals of Public and Cooperative Economy, 59, 1, 43 – 66.

Espinosa, J.G. and Zimbalist, A.S., (1978) Economic Democracy – Workers Participation in Chilean Industry 1970 – 73, Academic Press: New York.

Fairclough, M., (1986) 'Conditional Degeneration and Producer Cooperatives: A Reappraisal of the Socialist Traditions', Paper presented to the National Conference for Research on Worker Cooperatives, London.

Fama, E. F., (1980) 'Agency Problems and the Theory of the Firm', Journal of Political Economy, 88, 2, 288 – 307.

Fox, A., (1974) Beyond Contract, Faber and Faber: London.

Freeman, J. (1974) 'The Tyranny of Structurelessness', Berkley Journal of Sociology, 17, 151 – 164.

Freer, D., (1983) 'What the parties say – The Green position', Cooperation, 1, 5 – 8.

Fromm, E. (1965), The Sane Society, Premier Books. London.

Furubotn, E., (1976) 'The Long Run Analysis of the Labour Managed Firm: An Alternative Interpretation', American Economic Review, 66, 1, 104 – 123.

Furubotn, E. G., (1985) 'Codetermination, Productivity Gains and the Economics of the Firm', Oxford Economic Papers, 37, 1, 22 – 39.

Furubotn, E. G., and Pejovich, S. (1970) 'Property Rights and Behaviour of the Firm in a Socialist State: the Example of Yugoslavia', Zeitschrift für Nationalökonomie, 30, 431 – 454.

Gallagher, W.E. and Einhorn, H.J. (1976), 'Motivation Theory and Job Design', Journal of Business, 49, 358 – 373.

Ganguly, P., (1985) UK Small Business Statistics, Harper Rowe: London.

Gold, B. (1981), 'Economies of Scale: A Survey', Journal of Economic Literature, 19, 1, 5 – 23.

Granick, D. (1975) Enterprise Guidance in Eastern Europe, Princeton University Press: Princeton.

Greenberg, E., (1981) 'Industrial Self-management and Political Attitudes' American Political Science Review, 75, 29 – 42.

Greenberg, E., (1983) 'Context and Cooperation: Systematic Variation in the Political Effects of Workplace Democracy', Economic and Industrial Democracy 4, 191 – 223.

Gunn, C., (1988) 'Workers' Control: Conceptual and Practical Considerations', Paper presented to the Fifth International Conference on the Economics of Self-Management, Vienna.

Henderson, H., (1978) Creating Alternative Futures, Perigree: New York.

Hobbs, P. (1989), '1988 Survey of Worker Co-operatives – Summary Report, Co-operatives Research Unit Paper, Open University.

Hobbs, P. and Jefferis, K., (1988), 'So How Many Cooperatives are There?', Paper presented to the Conference on New Forms of Ownership – Management and Employment, Cardiff Business School, September, 1988.

Ichiiishi, T. (1977), 'Coalition Structure in a Labour-managed Market Economy', Econometrica, 45, 341 – 360.

Ireland, N. J., (1981) 'The Behaviour of the Labour-Managed Firm and Disutility from Supplying Factor Services' Economic Analysis and Workers' Management, 15, 21 – 43.

Imrie, R., (1986) 'Work Decentralisation from Large to Small Firms: a Preliminary Analysis of Subcontracting', Environment and Planning, 18, 949 – 65.

Ireland, N.J. and Law, P.J., (1982) Economics of Labour – Managed Enterprises, Croom Helm, London.

Ireland, N.J. and Law, P.J., (1988) Management Design under Labour Management, Journal of Comparative Economics, 12, 1 – 23.

Jackall, R. and Crain, C., (1984) 'The Shape of the Small Worker Cooperative Movement', in Jackall, R., and Levin, H. M., Worker Cooperative in America, University of California Press: California.

Jefferis, K., (1988) 'The Impact of Market Relations on the Economic Performance of British Worker Cooperatives 1975 – 1985', Paper presented to the Fifth International Conference on the Economics of Self – Management, Vienna.

Jefferis, K. and Thomas, A., (1985) 'Conditions for Financial Viability in Workers' Cooperatives: The Case of U.K. Clothing and Printing Co – ops', Cooperatives Research Unit, The Open University, Milton Keynes.

Jefferis, K. and Thomas, A., (1987) 'Measuring the Performance of Worker Cooperatives', in: Hopper, T. and Cooper, D., (eds.), Critical Accounts, Macmillan: London.

Jensen, M.C. and Meckling, W.H., (1976) 'Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure', Journal of Financial Economics, 3, 305 – 360.

Jensen, M. C. and Meckling, W. H. (1979) 'Rights and Production Functions;an Application to Labour – Managed Firms and Codetermination', Journal of Business Economics, 52, 4, 409 – 506.

Jones, D. C. (1982), 'British Producer Cooperatives, 1948 – 1968: Productivity and Organisational Structure' in Jones and Svejnar Participatory and Self – Managed Firms, Lexington: Massachussetts.

Jones, D. C. and Svejnar, J. (1985) 'Participation, Profit – Sharing, Worker Ownership and Efficiency in Italian Producer Cooperatives, Economica, 52, 449 – 465.

Kirkham, M. (1973) 'Industrial Producer Cooperation in Britain: Three Case Studies', Unpublished MA Thesis, University of Sheffield.

Knight, F., (1921) Risk, Uncertainty and Profit, Houghton Mifflin: New York.

Landry, C., Morley, D., Southwood, R. and Wright, P., (1985) What a Way to Run a Railroad: An Analysis of Radical Failure, Comedia: London.

Law, P. J., (1977) 'The Illyrian Firm and Fellner's Union – Management Model' Journal of Economic Studies, 4, 29 – 37.

Levin, H. M., (1982) 'Issues in Assessing the Comparative Productivity of Worker – Managed and Participatory Firms in Capitalist Society', chapter 3 in Jones, D. C. and Svejnar, J. (eds.), 'Participatory and Self Managed Firms, Lexington: Massacheussets.

Linblom, C.E. (1977), Politics and Markets, New York.

Maddala, G. S., (1986) Limited Dependent and Qualitative Variables in Econometrics, Cambridge University Press: London.

Mandel, E. (1975) 'Self – Management: Dangers and Possibilities', International, 2/3, 3 – 9.

Marglin, S.A. (1974), 'What do Bosses Do? The Origins and Functions of Hierarchy in Capitalist Production', Review of Radical Political Economics, 6, 27 – 43.

Marris, R. (1964) The Economic Theory of Managerial Capitalism, MacMillan: London.

Marx, K. (1967), Capital, Vol. 1.

Matthaei, J., (1984) 'Re – thinking scarcity: Neo – Classicism; Neo – Malthusianism and Neo – Marxism', Journal of Radical Political Economy, 16.

Meister, A., (1974) La participation dans les associations, Editions Ouvrieres: Paris.

Meister, A., (1984) Participation, Associations, Development and Change, Transaction Inc.: New Brunswick.

Mellor, M., Hannah, J. and Stirling J. W. G., (1988) Worker Cooperatives in Theory and Practice, Open University Press: Milton Keynes.

Michels, R., (1949) Political Parties: A Sociological Study of Oligarchical Tendencies of Modern Democracy, Free Press: New York.

Miyazaki, H. (1984) 'On the Success and Dissolution of the Labour – Managed Firm in the Capitalist Economy', Journal of Political Economy, 92, 5, 909 – 931.

Murray, R., (1989) 'Fordism and Post – Fordism', in New Times, (ed. S. Hall and M. Jaques), Lawrence and Wishart: London.

Neuberger, E. and James E., (1973) 'The Yugoslav Self – Managed Enterprise: A Systemic Approach' in: Bornstein, M., (ed.) Plan and Market: Economic Reform in Eastern Europe Yale University Press: New Haven.

Obradovic, J., (1978) 'Participation in Enterprise Decision – Making', in Obradovic, J. and Dunn, W. N. (eds.), Workers Self Management and Organisational Power in Yugoslavia, University Centre for International Studies: Pittsburg.

Paton, R., (1978) 'Some Problems of Cooperative Organisation' Open University Cooperatives Research Unit Monograph No. 3, Milton Keynes.

Perotin, V., (1986) 'Conditions of Survival and Closure of French Worker Cooperatives: Some Preliminary Findings', Advances in the Economic Analysis of Participatory Firms, 2.

Piore, M. J. and Sabel, C. F., (1984) The Second Industrial Divide: Possibilities for Prosperity, Basic Books: New York.

Plosser, C. I., Schwert, G. W. and White, H., (1982) 'Differencing as a Test of Specification', International Economic Review, 23, 535 – 552.

Poole, M., (1978) Workers Participation in Industry, Routledge and Keegan Paul: London.

Porritt, J., (1984) Seeing Green, Basil Blackwell: London.

Putterman, L., (1981) 'The Organisation of Work: Comment', Journal of Economic Behaviour and Organisation, 2, 273 – 279.

Putterman, L., (1984) 'On Some Recent Explanations of Why Capital Hires Labour', Economic Inquiry, 22, 2, 171 – 187.

Reich, M. and Devine, J., (1981) 'The Microeconomics of Conflict and Hierarchy in Capitalist Production', Review of Radical Political Economy, 12, 27 – 45.

Robinson, J., (1967) 'The Soviet Collective Farm as a Producer Cooperative: Comment' American Economic Review, 57, 222 – 23.

Samuelson, P.A. (1957), 'Wage and Interest: A modern dissection of Marxian economic models', American Economic Review, 47, 884 – 912.

Schutt, J. and Whittington, R., (1987) 'Fragmentation Strategies and the Rise of Small Units', Regional Studies, 21, 21 – 43.

Sen, A. K., (1966) 'Labour Allocation in a Cooperative Enterprise' Review of Economic Studies, 33, 361 – 71.

Shirom, A., (1972) 'The Industrial Relations System of Industrial Cooperatives in the United States: 1890 – 1985', Labour History, Fall, 533 – 551.

Smirlock, M. and Marshall W., (1983) 'Monopoly Power and Expense Preference Theory: Theory and Evidence to the Contrary', Bell Journal of Economics, 14, 1, 166 – 178.

Smith, A. (1904), The Wealth of Nations, Penguin: London.

Steinherr, A., (1977) 'On the Efficiency of Profit Sharing and Labor Participation in Management' Bell Journal of Economics, Autumn, 545 – 555.

Steinherr, A. and Thisse, J. F. (1979) 'Is there a Negatively Sloped Supply Curve in the Labor – Managed Firm ?' Economic Analysis and Workers Management, 13, 23 – 34.

Stephen, F. H., (1983) The Economic Analysis of Producers' Cooperatives Macmillan: London.

Stewart, G., (1986) Ph.D. Thesis, University of Warwick.

Stewart, G., (1987) 'Managerial Discretion in the Labor – Managed Firm', Advances in the Economic Analysis of Participatory and Labor – Managed Firms, 2, 143 – 163.

Stone, K. (1974), 'The Origins of Job Structures in the Steel Industry', Review of Radical Political Economics, 6, 113 – 173.

Svejnar, J., (1982) 'On the Theory of a Participatory Firm' Journal of Economic Theory, 27, 313 – 30.

- Taylor, A., (1986) Worker Cooperatives and the Social Economy, ICOM: Leeds.
- Tomlinson, J., (1982) The Unequal Struggle, Methuen: London.
- Tyson, L. D'A., (1979) 'Incentives, Income – sharing and Institutional Innovation in the Yugoslav Self – Managed Firm', Journal of Comparative Economics, 3, 285 – 301.
- Vanek, J., (1969) 'Decentralisation Under Workers' Management: A Theoretical Appraisal' American Economic Review, 59, 1006 – 14.
- Vanek, J., (1970) The General Theory of Labor – Managed Market Economies, Cornell University Press: Ithaca.
- Vanek, J., (1971) 'The Basic Theory of Financing of Participatory Firms', Cornell University, Department of Economics, Working Paper.
- Vanek, J., (1977) The Labor – Managed Economy: Essays by Jaroslav Vanek, Cornell University Press: Ithaca.
- Vienney, C., (1980) Socio – economie des organisations cooperatives, Cooperatives d'Information et d'Editions Mutualistes: Paris.
- Vernon, R., (1971) Sovereignty at Bay, Basic Books: New York.
- Ward, B., (1958) 'The Firm in Illyria: Market Syndicalism', American Economic Review, 68, 566 – 89.
- Webb, S. and Webb, B., (1914) 'Cooperative Production and Profit Sharing' Special supplement to New Statesman, 2.
- Webb, S. and Webb, B. (1920) A Constitution for the Socialist Commonwealth of Great Britain, Longman: London.
- Weber, M., (1968) Economy and Society Vol I, II, III, eds. G. Roth and C. Wittich, Bedminster Press: New York.
- Welford, R. J., (1988) 'Aspects of the Organisation and Behaviour of U.K. worker Cooperatives: Results of a Survey', Discussion Paper No. 11, School of Economics, Portsmouth Polytechnic.
- Welford, R. J., (1989) 'Growth Aspirations and the Performance – Participation Nexus: the Case of U.K. Producer Cooperatives', Economic Analysis and Worker's Management, 23, 1 – 18.

- Whyatt, A. (1987), 'Time for Change', New Socialist (supplement).
- Wiles, P. J. D., (1977) Economic Institutions Compared, Basil Blackwell: London.
- Williamson, O. E., (1964) The Economics of Discretionary Behaviour: Managerial Economics in a Theory of the Firm, Prentice Hall: Englewood Cliffs.
- Williamson, O.E. (1975), Markets and Hierarchies: Analysis and Anti-Trust Implications: A Study in the Economics of Internal Organisation, Free Press: New York.
- Williamson, O.E. (1976), 'The Evolution of Hierarchies: An Essay on the Organisation of Work', Fels Discussion Paper No.91, University of Pennsylvania, Philadelphia.
- Williamson, O.E. (1980), 'The Organisation of Work: A Comparative Institutional Assessment', Journal of Economic Behaviour and Organisation.
- Wilson, N., (1983) 'Economic Aspects of Worker Cooperatives in Britain', in Plunkett (ed.) The Economics of Worker Cooperatives, Plunkett: Oxford.
- Wood, S., (1989) The Transformation of Work: Skill, Flexibility and the Labour Process, Unwin Hyman: London.
- Woolham, J., (1987) 'Wholegrain Foods and the Bean Shop', Mimeo, Cooperatives Research Unit, Open University.



## APPENDICES

## APPENDIX A

Name of Cooperative

Address

Telephone

What is the product or service provided by the cooperative ?

Number of members of the cooperative

When was the cooperative established ?

Would you like to receive a copy of the final report ? Y/N

1. How important was each of the following factors in the establishment of your cooperative (please tick the relevant box):

Very                                      Not  
important    Important    important


religious reasons

political reasons

a redundancy situation / factory closure

a job creation programme

the provision of a particular product or service

availability of grants for cooperative ventures

the desire for a pleasant atmosphere at work

wanting to work for yourself

support of the local Cooperative Development Agency

a desire for equality with your fellow workers

others: (please state)

Which one of the above do you consider to be most important ?

If you consider it useful please expand on any of the items above.

2. Before embarking on this venture how many, if any, of the members had experience of the type of business you are operating ?

3. Can you briefly state the aims of your cooperative ?

4. To what extent do you expect your cooperative to grow in terms of turnover in the next 12 months and 3 years ?

	Decline	Remain the same	Grow by less than 10%	Grow by more than 10%
--	---------	--------------------	-----------------------------	-----------------------------

- a. 12 months  
b. 3 years


5. To what extent do you expect employment in the cooperative to expand in the next 12 months and 3 years ?

	Decline	Remain the same	Grow by less than 10%	Grow by more than 10%
--	---------	--------------------	-----------------------------	-----------------------------

- a. 12 months  
b. 3 years


6. To what extent do you expect incomes of the members of the cooperative to increase in the next 12 months and 3 years ?

	Decline	Remain the same	Grow by less than 10%	Grow by more than 10%
--	---------	--------------------	-----------------------------	-----------------------------

- a. 12 months  
b. 3 years


7. Are members paid regular wages of a fixed amount ? Y/N

Do wages vary with the surplus/profit of the coop ? Y/N

8. Compared with similar non-cooperative organisations are the wages paid:

<input type="checkbox"/>	Lower
<input type="checkbox"/>	About the same
<input type="checkbox"/>	Higher
<input type="checkbox"/>	Don't know

9. Are members paid:

<input type="checkbox"/>
<input type="checkbox"/>

- According to the same rate of pay  
A rate reflecting differences in skills ?

If there is a difference in wage rates please state the highest and lowest rate.

10. To what extent do members have a financial stake in the company ? (please tick):

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

- 100% of the capital was provided by the members  
Between 50% and 99% was provided by the members  
Under 50% of the capital was provided by the members  
None of the capital was provided by the members

11. Where did capital not provided by members come from ?

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

- Grants  
Unsecured loans  
Secured loans  
Other cooperatives  
Industrial Common Ownership Fund

Other (please state):

12. Given a surplus from trading please describe the percentage of that surplus which would typically go to each of the following:

- a. the members
- b. re-investment/ploughback
- c. charity
- d. other cooperatives
- e. others (please state):

13. If you have made a surplus recently how big would you estimate this to be as a proportion of total wages ?

14. Do you expect to be able to take advantage of the latest government legislation which allows tax relief on profit-sharing schemes ?

15. Which of the following describes how work is allocated amongst the members of the cooperative (please tick all that are relevant).

<input type="checkbox"/>	Work is divided on specific skill lines
<input type="checkbox"/>	Certain jobs have always been done by the same people
<input type="checkbox"/>	Work is rotated
<input type="checkbox"/>	There is no specific division of labour
<input type="checkbox"/>	Allocation is done by a manager or management team
<input type="checkbox"/>	Other (please specify):

16. Which of the following statements most closely reflects the way the cooperative is managed ?

a. On a day to day basis

<input type="checkbox"/>	a single manager makes the decisions
<input type="checkbox"/>	a management team makes the decisions
<input type="checkbox"/>	all members decide democratically on decisions
<input type="checkbox"/>	other (please specify):

b. When deciding on longer term policy

<input type="checkbox"/>	a single manager makes the decisions
<input type="checkbox"/>	a management team makes the decisions
<input type="checkbox"/>	all members decide democratically on decisions
<input type="checkbox"/>	other (please specify):

If applicable, is the manager or management team democratically elected ? Y/N

17. Do you consider that there are productivity advantages to be gained from cooperative organisations which do not exist in conventional firms ? Please state the reason for your answer.

18. Are you operating in a market sector which is generally dominated by

- a. large competitors ? Y/N  
b. large buyers of your product ? Y/N

If a. or b. or both is true please state what influence they have on you.

## APPENDIX B

Name of Cooperative

Address

Has the product or service offered by the cooperative changed over the last 12 months? (If so please give details).

Would you like a copy of the second report ? y/n

1. I am interested in knowing whether you perceive there to be advantages or disadvantages associated with the cooperative organisation in a number of areas.

Below is listed a series of attributes, please tick whether you consider these attributes to be superior, identical or inferior in a cooperative firm when compared with a traditional firm.

ATTRIBUTE	SUPERIOR (i.e.more or better)	IDENTICAL	INFERIOR (i.e. less or worse)
Work Intensity			
Care in use of equipment			
Coping with machine breakdown or worker illness			
Improvements to processes made by workers			
Responsiveness to new innovations			
Assignment of workers to appropriate tasks			
Leadership			
Contracting			



2. Age profile of cooperative members

- a) for small cooperatives please list the ages (only) of the members of the cooperative
- b) for larger cooperatives please give:
- i) the ages of the oldest and youngest members
  - ii) the approximate mean average age of members
  - iii) the age band within which most members fall

3. To what extent has the cooperative grown in terms of turnover over the last 12 months ?

Declined	Remained the same	Grown by less than 10%	Grown by more than 10%
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4. To what extent has employment in the cooperative grown in terms of employment over the last 12 months ?

Declined	Remained the same	Grown by less than 10%	Grown by more than 10%
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5. To what extent have the incomes of members increased over the last 12 months ?

Declined	Remained the same	Grown by less than 10%	Grown by more than 10%
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6. Have you been able to, or do you intend to, take advantage of the legislation on profit related pay allowing you tax relief on profit-sharing schemes ?

## APPENDIX C

ON THE EXISTENCE OF SURVEY BIAS

Following Plosser et.al.(1982) a robust test of survey bias can be constructed by the addition of an independent set of observations. Thus the following questionnaire sent to non-respondents in the first round can be used to detect any significant differences between the initial sample and a second independent sample. This in turn can give an indication of the type of characteristics apparent in the rest of a population. If for example characteristic 'a' is apparent in the second sample and not in the first then we may infer that subsequent non-respondents are likely to have that characteristic.

Using a test of the differences in two population proportions it can be shown, by the use of t-tests on the actual and expected values of the second survey, that there is no evidence (statistically) that the two samples come from a different population, and therefore there is no evidence of survey bias. Tables A1 to A7 are included to show that there is no bias. Figures in parenthesis are expected response rates for the second sample given the response in the first.

However, straightforward comparison of expected and actual values from the second survey do suggest some differences in one area, namely managerialism. Whilst there is not statistical foundation for this characteristic we must be aware that with such a small sample size in the second sample the t-statistics may be underestimating their true value. The implication is that a number of the missing firms might have rather larger degrees of managerialism than that suggested in the survey.

Reference:

Plosser, C I, Schwert, G W and White, H (1982). Differencing as a test of specification. International Economic Review, 23, 535-552.

Table A1: Aims of the Co-operative

Common areas of response

General aim reported	Number of co-operatives reporting this aim		
	Original Survey	Follow-up	t-value
The provision of employment/security of employment	23	3 (4.1)	0.17
The production and promotion of socially worthwhile goods	22	2 (4)	0.29
Working with and responsibility towards the community	8	0 (1.4)	0.37
Profitability and good rates of pay	9	3 (1.6)	-0.28
Viability of the co-operative/production to 'make a living'	9	1 (1.6)	0.14
Promoting the co-operative sector	12	1 (2.1)	0.24
Equal status for women and minority groups	9	0 (1.6)	0.39
Growth	5	3 (0.9)	-0.53
High quality of workmanship/creativity	6	2 (1.1)	-0.22
Training and skills development	12	0 (2.1)	0.45
Provision of good working conditions	6	1 (1.1)	0.02
Non-exploitation	5	1 (0.9)	-0.02
No response	15	5 (2.7)	-0.36

Table A2: Distribution of Surplus (where applicable)

Destination of surplus	Number of co-operatives distributing at least some of the surplus to this area		
	Original Survey	Follow-up	t-value
Members	44	10 (8)	-0.19
Re-investment	53	12 (9.6)	-0.21
Charity	18	2 (3.2)	0.20
Other co-operatives	6	1 (1.1)	0.02

Non-respondents = 6

Table A3: Wage Payments

	Original Survey	Follow-up	t-value
Co-operatives paying members regular wages	52	10 (9.5)	-0.05
Co-operatives not paying regular wages	10	2 (1.8)	-0.04
Non-respondents	4	0 (0.7)	-0.26
Wages paid in the co-operative compared with the non-co-operative sector			
Lower	25	2 (4.5)	0.35
About the same	20	5 (3.6)	-0.20
Higher	12	3 (2.2)	-0.15
Don't know	7	2 (2.1)	-0.17
Non-respondents	2	0 (0.4)	0.19
Co-operatives paying members according to the same rate of pay	44	9 (8)	-0.10
Co-operatives paying members differing rates	19	3 (3.4)	0.07
Non-respondents	3	0 (0.5)	0.23

Table A4: Responses to Question 17

Do you consider there are productivity advantages to be gained from co-operative organisations which do not exist in conventional firms?

Areas commonly cited by those believing there to be productivity advantages	Number of co-operatives citing this area		
	Original Survey	Follow-up	t-value
Motivation	5	1 (0.9)	-0.02
Flexibility	9	2 (1.6)	-0.08
Commitment	15	4 (2.7)	-0.21
No demarcation/No unionisation	5	0 (0.9)	0.29
Self monitoring/No shirking	7	1 (2.1)	0.07
Members receive the benefits of their labour	4	1 (0.7)	-0.09
Happy atmosphere	8	2 (1.4)	-0.12

Areas commonly cited by those believing there to be productivity advantages	Number of co-operatives citing this area		
	Original survey	Follow-up	t-value
Slow decision making process	4	1 (0.7)	-0.08
Work effort is not expected to be so intense	2	1 (0.4)	-0.26
Inability to raise money for expansion	4	0 (0.7)	0.26
Humanist aims are not compatible with high productivity	3	0 (0.5)	0.23

Summary of responses:	Yes	No	Don't Know	Non-respondents
Original survey	32	11	2	21
Follow-up	5 (5.8)	2 (2)	1 (0.4)	3 (0.5)
t-value	0.10	0	-0.26	0.12

Table A5: Allocation of Work Amongst Members of the Co-operative

Allocation device	Number of co-operatives citing this as a method of job allocation		
	Original Survey	Follow-up	t-value
Work is divided on specific skill lines	41	6 (7.4)	0.15
Certain jobs have always been done by the same people	12	3 (2.1)	-0.15
Work is rotated	9	0 (1.6)	0.39
There is not specific division of labour	17	4 (3.1)	-0.14
Allocation is done by a manager or management team	6	4 (1.3)	-0.65
Other	0	0 (0)	0
Non-respondents	4	0 (0.7)	0.26



Table A6: Decision Making in the Co-operative Enterprise

Co-operatives reported the following strategies for decision making	Number of co-operatives		
	Original Survey	Follow-up	t-value
<u>On a day to day basis</u>			
A single manager makes the decisions	20	2 (3.6)	0.2
A management team makes the decisions	13	7 (2.4)	-0.7
All members decide democratically on decisions	26	3 (4.7)	0.2
Other (not specified)	1	1 (0.2)	-0.4
Non-respondents	6	6 (1.1)	-1.0
<u>When deciding on longer term policy</u>			
A single manager makes the decisions	0	0 (0)	0
A management team makes the decisions	4	5 (0.7)	-1.0
All members decide democratically on decisions	54	7 (9.8)	0.25
Other (not specified)	2	0 (0.4)	0.18
Non-respondents	6	0 (1.3)	0.32

Where applicable were managers democratically elected?

	Yes	No	Not Clear/No Response
Original survey	20	5	8
Follow-up	7 (3.6)	2 (0.9)	0 (1.4)
t-value	-0.46	-0.29	0.37

Table A7: Question 18

Are you operating in a market sector which is generally dominated by:			
	Original Survey	Follow-up	t-value
(a) <u>Large Competitors</u>	Y = 28	5 (5.1)	0.01
	N = 29	7 (5.3)	-0.21
	no response = 9	0 (1.6)	0.40
(b) <u>Large Buyers</u>	Y = 18	3 (3.3)	0.04
	N = 36	9 (6.6)	-0.26
	no response = 12	0 (2.1)	0.45

Commonly stated influences on the co-operative - as stated by respondents:	No of co-operatives stating this factor		
	Original Survey	Follow-up	t-value
(a) <u>Large Competitors</u>			
little because we specialise	6	0 (1.1)	0.32
they make us more efficient	3	0 (0.5)	0.23
they focus our trade on particular sectors	3	1 (0.5)	-0.16
they enforce restrictions and push down prices	4	1 (0.7)	-0.09
(b) <u>Large Buyers</u>			
they dictate prices and discounts	3	1 (0.5)	-0.16
they make us more efficient	4	0 (0.7)	0.26
we would not exist without them	3	0 (0.5)	0.23

### TESTS OF THE DIFFERENCE IN TWO POPULATION PROPORTIONS

Suppose we have two populations, 1 and 2, with respective success proportions  $p_1$  and  $p_2$ . Then sample proportions  $p_1$ , for samples of  $n$ , from population 1 are normally distributed. Likewise with sample proportions  $p_2$ .

The standard error of the proportion is

$$se(p_1) = \sqrt{\frac{p_1 q_1}{n_1}}$$

and similarly

$$se(p_2) = \sqrt{\frac{p_2 q_2}{n_2}}$$

The standard error of the difference between the sample proportions is given by

$$se(p_1 - p_2) = \sqrt{\frac{p_1 q_1}{n_1} + \frac{p_2 q_2}{n_2}}$$

Correcting for degrees of freedom the standard error becomes

$$se(p_1 - p_2) = \sqrt{\frac{n_1 \frac{p_1 q_1}{n_1 - 1} + n_2 \frac{p_2 q_2}{n_2 - 1}}{n_1 + n_2 - 2}}$$

and we can use a t-test with  $(n_1 + n_2 - 2)$  degrees of freedom to detect differences between an actual observation in the second sample and a predicted value based on the first sample. The critical t-value at a 5% significance level with 76 degrees of freedom being 1.67.